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THE PISTOL ATTACK.

(A Suggested Chapter for our Cavalry Service Regulations.)

BY CAPTAIN H. S. HAWKINS, THIRD CAVALRY.

PREFACE.

THE mounted action of cavalry has received, with the advent of the automatic pistol, an importance far greater than is generally realized. Whatever may be the merits, or demerits of the *arme blanche*, the *automatic pistol* is a weapon capable of making a cavalry, properly trained to its use, most formidable and efficient in its mounted attack. This efficiency would not be impaired but rather increased by the peculiarities of the terrain which might make close order combat difficult.

If the army should be required to intervene in Mexico the cavalry, if properly handled, would be a most important arm. It could almost be said *the* most important arm. But to call one arm more important than another in an army where all branches are necessary, is like asserting that one limb of a soldier's body is more important than all else. If all parts are necessary, then, without regard to the numerical strength required for any branch of the service, all branches are of equal importance.

But in Mexico the cavalry could hardly be too numerous. Its numbers would be limited only by the following:

1. A failure on the part of our authorities to appreciate the value and to provide the proper number of trained regiments. Untrained regiments would be useless.
2. An inability of our government to provide the great number of horses necessary for remount purposes.
3. The difficulties of feeding a great number of horses in the theater of operations.

Take these three limitations away and the more cavalry we had for intervention purposes the better. In such a case, indeed in any case, the automatic pistol would be sure to play a tremendous part. We should therefore prepare.

If we had to oppose the cavalry of a modern army, the automatic would, provided a proper system of tactics is used and troops properly trained, revolutionize the mounted combat and increase its importance a hundredfold.

Learning to shoot the automatic has been proven to the satisfaction of many American officers to be easier than learning to handle the saber.

There are two general forms of the pistol attack as described in this paper.

An apparent but not a real objection to the first form of pistol attack herein described, which is used when the enemy is charging in close order, with saber or lance, and which involves the turning of the trooper in front of the enemy so as to ride with him in the same direction, is that in the mounted attack the trooper should not be encouraged to turn his back upon the enemy. But a training and explanation to the trooper that this is an offensive movement, that it is not running away but simply a method of inducing the enemy to close with him in a position where the trooper could have the enemy at his mercy, would obviate all objection on the ground of moral effect.

That the trooper should always go forward and "*never turn his back upon the enemy*" is a trite saying to bolster up the trooper's courage when using the *arme blanche*. We have been given a weapon of great usefulness, and to allow an old saying,

made for another arm, to prevent our putting the automatic pistol to its greatest usefulness and developing a tactics to enable us to use it to efficiency and to its greatest possibility, would indeed be foolish.

There are those, who, holding fast to old traditions, may say that a cavalry trained to use dismounted action with great efficiency cannot be trained to the more dashing and more bold and reckless mounted work sometimes demanded of it. This was utterly disproved in our Civil War. To be sure, a cavalry resorting to too much dismounted action may lose the spirit of dash and the inclination for mounted work. It may become too cold and calculating. This should be carefully guarded against.

Now, the pistol attack as described here is the most inspiring, most dashing form of cavalry mounted action. It, in addition, gives the trooper, a method by which he may attack his enemy with greatest effect and without leaving him ignorant or speculative as to what happens when he reaches his enemy. It enables him to use his pistol with little chance of endangering his comrades, or himself becoming a victim to their fire. And this latter thing will refute another old and unproved assertion, that in the mounted combat the pistol is as dangerous to friend as to foe.

The pistol attack will therefore have the effect of imbuing our cavalry with the spirit of mounted action, a result that, in view of the events of the latest wars, may possibly not be attained by training with the saber or lance.

It remains to devise and insert in a chapter for our drill book a system of combat with the automatic pistol so that its possibilities may be fairly realized.

THE PISTOL COMBAT.

The first essential in the training of troops for the pistol combat is equitation and horse training. The second essential is target practice and a skillful and safe manipulation of the arm.

The third essential is a system of tactical training to enable our troops to bring into action every pistol that it is possible to use in any given case without interference with each other and without confusion amongst the troopers, and with the deadliest effect upon the enemy and the least loss to ourselves.

The Platoon in the Pistol Attack:

The form of the pistol attack depends upon the kind of enemy to be attacked.

There are *two forms* of the Pistol Attack broadly speaking.

The *first* is that where the enemy consists of *cavalry in close order* and attempting to charge, and where the troopers in the pistol attack charge down upon the enemy, those immediately in front of him turning about and riding in the same direction as the enemy, allowing him to approach within ten yards before shooting; those overlapping the flanks riding so as to envelope the enemy's flanks.

The *second form*, which is the one that will be of more general and frequent application, is that in which the troopers ride home and do not turn about in front of the enemy. This finds application against cavalry deployed as *foragers*, against *infantry* or *any dismounted enemy*, *artillery*, *convoys*, *irregular cavalry*, etc. In these cases the troopers ride so as to use their pistols at close range. They may, in many cases, ride through, pull up, and turning about, ride through again. In attacking artillery, or convoys, or similar objectives, the troopers not detailed to attack the escorts pull up around the carriages, wagons and teams. In some emergencies, such as striking a wire fence, marshy ground, a group of houses occupied by the enemy, etc., they may leap from their horses and use their rifles, thus changing the character of the fighting according to circumstances.

Each of these two general forms of the Pistol Attack is initiated by the same general commands and means. The rest is left to the judgment and initiative of the leaders.

To attack *modern cavalry* armed with saber or lance and attempting to charge in *close order* the platoon advances in close order as long as conditions permit, and then deploy as

foragers with three yards interval, and dashes toward the enemy. When at about sixty yards from the enemy the chief gives the signal for turning to the rear. Each trooper closes his legs and pulls his horse up on his haunches and turns to the left about. The enemy naturally will now be coming on at full speed, and as the troopers of the platoon turn and are getting under way to the rear the speed of the enemy will bring him almost upon the heels of the platoon. This is what is desired. The troopers will be able to gain enough speed to avoid being run over, and, at distances of ten yards and preferably less, will commence firing to the rear. The men must be trained to be bold and allow the enemy to come so close that the troopers can hardly miss. The enemy is now at the mercy of the platoon. (First form.)

Contrary to the above method, when attacking a line of pistol men or infantry, or when pursuing fugitives, the troopers charge home, commencing fire at ten yards and attempting to ride up alongside of their opponents if the latter are mounted, or over them if dismounted. (Second form.)

The platoon commander must train his men carefully in practicing these attacks on different kinds of imaginary, outlined or a represented enemy. He practices his men in riding as full speed, pulling up the horse so that he halts on his haunches with his head still turned toward the enemy, and turning speedily about on the haunches and starting to the rear at the gallop.

In executing that form of attack in which this turn it necessary the men must be taught not to turn about on a wide circle of several yards but to pull up as indicated above and turn to the left about on the haunches. The horses soon learn to do this with great rapidity. Practice will make it easy to turn in this manner even those horses that are pullers. The trooper sits with his body well back and closes his legs well back and vigorously. At the same moment he pulls on the reins allowing his weight to pull without any jerking on the horse's mouth. A little daily practice at this will soon make a horse check up at the signal of leaning well back. This leaning back must be done as in the half-halt. If the horse does not immediately respond the trooper does not continue to lean

back and pull on the reins, but immediately straightens up releasing pressure on the horse's mouth, and again attempts the half-halt by the same means. This resembles the stop and turn of a cow pony or a well trained polo pony. The about on a circle at high speed is bad because it is apt to put the horse out of hand, and cause collision with comrades, take the trooper away from his place or out of the action.

In the pistol attack, as may be readily seen, the stop and turn on the haunches is useful in various ways besides that of attacking a close order line of saber men. It is the only way to turn about in a combat amongst charging horsemen.

The platoon, whatever its numbers or its formation, must always be divided into squads of eight men each. These squads should be as permanent as possible, and in the field should be used for administrative as well as tactical purposes. More than eight men is too many in one squad.

To execute the pistol attack the chief signals or commands:

- (1) *Platoon to the Pistol Attack,*
- (2) *March.*

The platoon immediately deploys as foragers on the center corporal with three yards interval. The chief places himself in front of the center corporal and conducts his platoon. He now proceeds to the attack according to the nature of his enemy. When deploying from column of squads the leading squad must be careful to oblige to the right to its position at a gait not too fast to allow the other squads to gain their position on the line at a twelve mile gallop. The gait may be increased when all are on the line. In deploying from line or from column the squad leaders must lead their squads until the deployment is completed, when they take their places in the line unless otherwise ordered. To do this the squad leaders command:

(Such) Squad, follow me;

and when clear of the column;

As Foragers.

March.

If they now must take their places in the line they command:

Guide on the Center Corporal.

They then drop back in to the line near the center of the squads. It will usually be found best to have squad leaders lead their platoons throughout the action.

If he desires his attack to take the form of turning in front of the enemy (1st form) the leader rides at his objective to the proper distance from the hostile line (about sixty yards, depending upon the speed of the two hostile lines and determined by practice), when he gives the signal "*Troopers, About,*" and also shouts the command. At the same time that he checks his horse upon his haunches he gives the command of execution. His horse's check is an additional signal for the execution of the command. Here again it is necessary to emphasize on the importance of making the horse check or half-stop on the haunches with his head still turned toward the enemy until the stop is almost complete, when the whirl or pirouette to the left about is executed. It is necessary to keep the legs well closed both at the commencement and at the end of the movement so as to force the horse rapidly into the bit and into his stride in the reverse direction. When once turned and the horses have gotten into their stride the troopers allow the enemy to close to dead sure distance (ten yards or less) and commence firing to the right rear and rear. Firing at the heads of the enemy's horses may bring them down and cause rear rank files to fall over them, and great confusion in his ranks may ensue.

The trooper must be careful to ride straight in front of that portion of the enemy's line before which he has turned his horse about. He continues to fire with such deliberation as is necessary to make every shot count.

The enemy's line should, under such fire, be gradually broken up and dispersed. He will naturally press his horse to full speed to endeavor to overtake the firing line and use his sabers or lances. But he will be helpless. The longer he stays in close order the better the target he affords. If the enemy breaks up or deploys, the troopers of the firing line will no longer feel any danger of being overridden, and still attempting to keep their opponents slightly in rear of them will allow them to come still closer, and pick them off at their leisure. Thus the enemy is in a bad way in any case. If he has gotten enough and

pulls up to run away the troopers turn about again and pursue. *In this case each squad leader should assume personal control of his squad.*

If ammunition is exhausted before the proper effect is made on the enemy the chief attempts to rally his men as best he can either on the flanks or straight to the rear. But as the trooper has at least three clips of ammunition and should be able to load while galloping at full speed, there is little probability of this contingency. The first clip will probably be enough. If the attack fails there is nothing to be said. Squad leaders on the flanks might draw their squads off and rally. By retreating on radiating lines the enemy may be drawn into a dispersion which may allow isolated groups to be attacked or at least may cause him confusion and place the hostile troopers out of control of their commander.

In the pistol attack on *hostile formations other than cavalry in close order* (second form) the chief of the platoon does as his judgment and fighting spirit dictates, bearing in mind the cardinal principles of getting close to the enemy before firing.

If, when a platoon is already deployed, the chief wishes his squad leaders to lead their squads, which may be very advantageous in the pistol attack, he commands or signals: *Squad Leaders to the Front, March.* The squad leaders immediately command:

(1) *(Such) Squad follow me.*

They then place themselves in front to lead, regulating on the directing (base) squad which follows the chief and is indicated by the chief who places himself in front of the selected squad. This is especially applicable in broken or wooded country but may be used at any time.

The platoon may be deployed in the pistol attack by first forming *Line of Squads*, and then at the desired moment commanding:

(1) *Platoon to the Pistol Attack.*

(2) *March.*

Or, the platoon may already be deployed as foragers and the pistol attack ordered when desired, the men closing to three yards intervals if not already at such intervals.

If the platoon leader desires to launch a *squad* into the pistol attack he indicates the objective and commands:

- (1) *(Such) Squad to the Pistol Attack.*
- (2) *March.*

The squad leader of the designated squad commands:

- (1) *(Such) Squad to the Pistol Attack.*
- (2) *Follow me.*

The men deploy on the nearest man to the leader or the leader may designate the base trooper as he moves out to the front.

In charging out of an ambush or other critical position, especially where many obstacles exist or a roadway is the only possible exit, it may be necessary to charge in column of squads or half-squads, fours or twos. In such case the troopers on the right of the column fire to the right and those on the left fire to the left.

The unit being in column the commander orders: *Forward, Charge.* The men draw pistol and the column gallops forward. This command cannot be mistaken for the Pistol Attack which involves a deployment. In order that all pistols may be used it would, obviously, be better to charge in column of twos than in column of fours. But this method is only an expedient for units no larger than a platoon and where there is not time to deploy into the Pistol Attack. If at the moment the emergency arrives the unit is in column of fours there will not be time to form column of twos. If there were time it would be better to send each squad forward into the pistol attack, followed, at about seventy-five or one hundred yards by the next squad. If there is room to deploy the whole platoon on one line it should be done. This form of attack is therefore only an expedient to dash out of a critical position where time and space do not allow deployment.

A platoon caught in a narrow space will usually have time to execute the Pistol Attack by successive squads and this will be far more effective than charging in column.

A *squad* acting alone, and not having space to deploy, must, however, use this form of attack. It should be practiced

and the men taught to realize the difference between it and the ordinary Pistol Attack.

GENERAL PRINCIPLES.

The following general principles are to be carefully studied and observed.

1. The pistol is a weapon of short range; and while, with a steady rest some accuracy is attained at a range of several hundred yards, it is intended for use in hand to hand fighting or at a distance rarely exceeding ten yards. Troopers should therefore be trained to withhold their fire until the enemy is at or within that range. To fire and miss disconcerts the trooper and heartens his adversary. To withhold his fire until he is almost certain of hitting and then successfully hitting the enemy, gives the trooper a confidence in himself and his arm that renders him invincible.

2. Shooting against an enemy to the rear or right rear is very easy, and a trooper who, in the face of a charging enemy, armed with saber or lance, turns his horse to the left about and gallops in front of his enemy, allowing the latter to approach to within ten yards or dead sure distance, is not running away and loses no morale thereby. If he once brings down an enemy in the above manner he will gain such confidence, that he will never retreat from a combat except to entice his enemy into "*dead sure*" range of his pistol.

On the other hand, to teach and require him to continue to advance against an enemy charging in close order, after commencing to fire with his pistol, and, as a consequence to come into violent contact with his enemy even though the latter be already hit by bullets from his pistol, is to insure his loss of confidence and to make it impossible to ever charge freely home again without a check or voluntary, or involuntary, pulling up to avoid the shock. Thus he is refusing to follow his training or obey his orders, and loss of spirit, of discipline and of morale will follow.

3. If it is necessary to shoot straight to the rear the trooper should be careful not to carry his bridle hand to the right and thus deflect his horse. In some cases he may shoot

to the rear by turning his left shoulder to the rear and shoot thus to the rear from the left side of his horse instead of from the right. It has been proved on the target range that shooting to the left is as easy as shooting to the right. Shooting to the left rear is not difficult and may be necessary. But, when riding in front of, and, in the same direction as his opponent the trooper should endeavor to keep the opponent on his right rear and at dead sure range.

4. In attacks on cavalry in close order those troopers who, by the extension of the flanks of the deployed unit to which they belong, find themselves out beyond the enemy's flanks and not directly threatened by opponents in their front should continue forward to attempt to place themselves on the enemy's flanks and rear. Then, by turning, so as to ride with the enemy, they shoot to the right or left, depending whether they are on his left or right flank, being careful to avoid interference with each other and to close to dead sure range from the enemy. In case there are more troopers on the enemy's flanks than are able to shoot without interference, those in excess of the convenient number for flank firing should ride to the enemy's rear.

5. Pistol attacks are always made in extended order as foragers when it is possible to deploy. In case the attack with pistols is attempted, but from lack of time or space the unit is unable to deploy into extended order, then only the first rank should fire, and succeeding ranks should withhold fire until a more favorable position is attained.

6. The attacking line with pistols should be ordinarily deployed as foragers with intervals of three yards.

7. Only that unit for which there is space to deploy, or which is sufficient and not superfluous in numbers to properly cover the enemy by a swarm of foragers, should be launched against him. Too large a force will not have sufficient room to get all into action without interference and undue confusion.

For example:

(a) When a whole troop on an open plain encounters a hostile platoon no more than one platoon should be launched into the pistol attack in the first line.

(b) When in column on a fenced road and the enemy is encountered in column on the same road, there may be only room for the first squad or other leading unit to execute the pistol attack. The same applies to any restricted space.

In such cases successive lines should be employed. If the attack is against cavalry riding in column in close order the first line executes the pistol attack and succeeding lines may be deployed and turned about so as to allow the first line to check the enemy and, after exhausting ammunition, to return through the intervals and be replaced by the succeeding lines. Or, the units in rear of the first may break through the fences and attack the enemy's columns in flank. This could be done especially where the first line of attack is the advance guard, thus giving the main body more time for such a maneuver. If the restricted space is a defile, the rear units may retire until the ground opens out and more room for deployment and flank attack is obtained.

In a sudden and unexpected attack against a short infantry column under such conditions, the succeeding lines may ride entirely through the column.

It may also be possible for the leading unit to execute the pistol attack and units in rear to dismount and crawl through the fences or seize a favorable position to fire on the enemy's column in flank.

8. When the enemy is believed to be near or likely to be suddenly encountered pistols should be carried loaded and locked. There is little danger in this for short periods. Extra magazines, at least two for each trooper, should be loaded and carried where they may be readily obtained for reloading pistols.

9. When reloading troopers should be trained to carefully save the empty magazines by dropping them into the pocket of the blouse or shirt. But as many may be lost in a combat plenty of extra magazines should be taken into the field.

10. In pursuit of a retreating enemy any formation convenient for gaits necessary to overtake him may be used. But, if successful in overtaking him the units should be deployed according to the prescribed principles. In such case the trooper

should withhold fire until the enemy is overtaken. If unable to overtake him longer ranges may be used by direction of the leader or the unit halted and rifle fire resorted to.

11. In retreating from an enemy in pursuit the object is to get away, and the unit should be covered by only a force sufficient in size to deploy without loss of time. This force may be permitted to fire pistols to the rear at ranges up to 150 yards. To fire at any distance greater than the above is wasting ammunition, and, if necessary, the rifle should be used.

Retreating as considered in this paragraph is not to be confused with the turning of the horse and riding at dead sure distance in front of the enemy as described for attacking cavalry in close order. The latter is an offensive movement consistent with attack. The former is a defensive movement consistent only with retreat.

12. In the pistol attacks the units must be led by their chiefs as is done in other forms of attack. When the enemy is reached the troopers move up abreast of the chief.

13. The platoon is the fighting unit and the troopers must be trained to give their attention, even when firing, to the chief and to obey his signals and orders. The chiefs of platoon are given great latitude and their initiative encouraged and developed. Once the attack is launched it becomes a matter of platoons.

14. The pistol attack finds particular application as follows:

(a) Patrols, for attack and defense. (First or Second Forms.)

(b) To draw the enemy under fire of other troops or into position offering other troops advantageous opportunities to attack in flank or rear. In such cases the troopers should turn at signal of chief at sufficient distance to allow other troops to attack. (First Form.)

(c) To attack close order formations of hostile cavalry depending on the saber or lance, and to break up their order and throw them into confusion when they may be attacked by

other lines of pistol men or by any other form of attack. (First Form.)

(d) To pursue fleeing troops of any arm. (Second Form.)

(e) To attack infantry under any conditions which allow cavalry to reach it. (Second Form.)

(f) To attack artillery. (Second Form.)

(g) To attack or repel an attack on a convoy. (First or Second Forms.)

(h) To attack irregular troops. (Second Form.)

(i) To attack led horses. (Second Form.)

(j) To delay an enemy's attack on your flank or rear. (First or Second Forms.)

(k) To charge through and escape an ambush. (Second Form.)

(l) To retreat from a very superior force. (Second Form.)

(m) To attack in brush or wooded country or villages. (First or Second Forms.)

15. An essential of the pistol attack is surprise or confusion in the enemy's mind as to your intentions. It must therefore be made at the swiftest speed compatible with control of the horse. If the enemy by his movements shows his intention to attack mounted he must be induced to commit himself to the charge and believe that you intend the same. The turning about in his front must come as a surprise. You must therefore approach in close order as long as conditions permit. If he turns and flees the troopers continue after him in pursuit as long as is judged wise by the chief.

In sudden encounters when the enemy is close the deployment must be made at once and no advance attempted in close order. The same applies if you are brought under artillery or rifle fire.

THE SQUADRON (TROOP) IN THE PISTOL ATTACK.

The squadron executes the pistol attack either alone or in combination with other troops. When alone a reserve must be held in close order and combat patrols furnished.

When the enemy is seen and the pistol attack is decided upon the Captain commands:

- (1) *Squadron (or Troop) to the Pistol Attack.*
- (2) *(If acting alone) such Platoon or Platoons in Reserve.*
- (3) *March.*

The Captain indicates to the base or directing platoon its objective.

The base platoon moves to the front toward the enemy's center at the trot.

The other platoons gain the proper intervals for deploying fan shape at the gallop. The formation now becomes a line of platoons and when all are on the line the base platoon deploys as foragers at three yards interval and all take the gallop. It is important that the platoons be all on the line of the base platoon and not in echelon. A rough line is, of course, all that is necessary.

The speed is increased and the attack made as prescribed for the platoon, each chief of platoon leading and determining his direction so as to work together and to cover the enemy's front with a swarm of foragers, guiding on the base platoon.

The enemy's flanks are overlapped as indicated for the platoon, (General Principles No. 4). In case a platoon finds itself out beyond the flank of the enemy, due to lack of room on his front, the leader attacks the enemy's flank or rear and exerts all his faculties in getting into action and putting his men to useful employment. The greatest initiative and independence is here expected.

Platoon leaders on the flanks should not hesitate to direct their attacks upon a force of the enemy executing by surprise a flank attack on our line, provided this new enemy is not so far away that he may be attended to by our reserves. But it must be borne in mind that a position of the platoon *in front* of the enemy is the most important place for it to fill, and the platoon should not therefore be borne away from this objective if it can avoid it. Once our attacking line is in position to fire its pistols in front of the enemy it cannot be endangered by a flank attack of the enemy since the position is so close that such

an attack by them would harm their own troops more than it would ours.

If, in the first form of attack, the enemy's advance continues until the cartridges in the pistols of our attacking line are all expended, the chiefs attempt to lead their platoons away on radiating lines so as to allow the reserves to deploy and to attack the enemy. Pistols are reloaded as soon as possible, the platoons rallied and then conducted as the captain may signal or direct; or, in the absence of his instructions, to re-attack the enemy. Here again, the initiative, resource, and fighting spirit of the platoon chief is expected.

The reserve may be handled according to circumstances, to form another attacking line, allowing the first line or lines to rally and reload, to repel flank attacks or to make them, to draw saber and charge in close order against the lines of the men broken by the pistol attack, or to use dismounted fire, as the conditions may indicate.

It must not be used to attempt a reinforcement of the attacking line or lines unless these units are so thinned out by losses as to make too much crowding or collision improbable, or unless the attacking units are withdrawing to reload.

When the attacking line is sent forward it must contain all the units that can be successfully used against the objective. If the enemy's lines are extended, units of the reserve may be sent to reinforce the attacking lines, but the group reinforcement must be always used unless the losses in the attacking line make imperative and practicable a reinforcement by mixing.

A platoon may find itself in rear of or on the flanks of the first line of the enemy. The chief may then make use of any kind of combat training. If an obstacle, hill, clump of trees, deep ditch, barbed wire fence, offers advantages he may dismount and link in couples to use rifle fire on the enemy's second line, his flanking groups, his reserves.

By breaking into the fields a platoon or indeed a larger force may be able to execute a pistol attack upon an enemy's column caught in a road between *barbed wire* fences. The advantages of the pistol attack are here apparent. The enemy may also be induced to charge with an undiscovered barbed wire

fence between him and us. In such cases the pistol men let him hit the fence and then ride to it and open fire.

If the Pistol Attack is used to attack infantry or deployed cavalry (Second Form), several lines are very advantageous. Depth may be here a necessity. Distance between lines depends upon the size of the force, strength and formation of the enemy, and terrain.

If, in the second form of attack, the attacking force, less the reserve, is disposed *in one line* this line charges through the enemy's lines or columns. Then, at signal or command of the platoon leader, "*Troopers, About*" the troopers pull up to the half-halt and turn about on the haunches and charge back. Thus each platoon charges through the enemy's ranks, forward and back, until a decision is obtained.

If the attacking force is disposed *in several lines* attacking over the same ground, then all the lines charge through the enemy forward before any of them charge back. It is necessary in this case for each line to rally after charging through in order to avoid confusion with succeeding lines. After rallying the lines are rapidly disposed so as to deploy and charge back without loss of time. A line which has charged through forward should not attempt to charge back while a succeeding line is charging forward. As the leader of any unit sent to the pistol attack may not know whether a succeeding line is charging the enemy over the same ground or not, he must, after pulling up or rallying, be careful to observe whether or not a succeeding line is following him before he charges back. As this may be difficult, especially in thick wooded country, the commander of the whole should determine the matter before the attack is initiated.

When the Captain wishes to *attack in several lines* he commands:

- (1) *To attack in (so many) lines.*
- (2) *(Such) platoon (or platoons) to the Pistol Attack.*
- (3) *March.*

The objective is now indicated, if necessary, and the commander sends out other units at the time and distance he judges

the situation demands, bearing in mind the necessity of having a succeeding line attack the enemy before he has recovered from the attack of a preceding line.

Different platoons may be sent to the Pistol Attack on different objectives.

When a platoon is acting alone the squads are handled in the same manner as platoons are handled in the troop acting alone.

Larger forces than the troop conform to the same principles, substituting the words *Troop*, or *Squadron*, for the word *Platoon*, in the commands.

Troops must be practiced in making the Pistol Attack under all the contingencies referred to herein or that the instructor may conceive. A command in which squad and platoon leaders have been taught to lead and control their units under all conditions, may be relied upon to bring order out of confusion no matter how unforeseen the circumstances. With the initiative of its unit leaders well developed such a command may be apparently in great confusion and disorder and in reality, may be capable of logical, combined and formidable action.



FIELD TRAINING FOR CAVALRY.

BY LIEUTENANT COLONEL DEROSEY C. CABELL, TENTH CAVALRY.

THE recent official Bulletins from the office of the Chief of Staff containing parts of the proposed Manual of Training for officers serving with troops indicates that the course will consist of *garrison* and of *field training*, somewhat as is now the case under the provisions of General Order No. 17, 1913.

The years of work and experience we have in the past devoted to garrison training have evolved a good system. We have the Garrison School, with its methods and textbooks, worked out and in good running shape. This work is supplemented by that at the Army School of the Line and at the War College. We have regular hours for drill and will doubtless soon have a satisfactory drill book. So that the theoretical part and the drill part of our education are both well provided for.

For an accomplished officer a knowledge of these matters is essential; but it is not enough to make him a practical soldier.

For the enlisted man we also have schools and drill; and yet he is, like the officer, far from being made a practical soldier or efficient instructor for the new men we must train for war.

The proposed Manual of Training, under the heading, "Tactical Handling of Troops," refers to the Drill Regulations and the Field Service Regulations as the written guides for this training.

It is a mistake to say that in *field training* it is possible to give general principles only, and that it is not practicable nor desirable to go into details nor to give exact directions nor explicit examples. In drill, as we know, this principle does not apply.

In *range firing*, a part of *field training*, this would not be sufficient. Our Small Arms Firing Regulations gives many illustrative examples of Combat Firing. It is understood that the School of Musketry is at present working out problems to be used in *Combat Firing* and in the *Proficiency Test*; and that these are to be sent out to the troops not only as tests but as examples or problems to guide them in developing the training of the troops. If this can be done in *Range Practice*, there seems no good reason why it cannot be done in other parts of *Field Training*.

If it is to be done for the other parts of *Field Training* it should be done as carefully and with as much intelligence as it has been and as it is proposed to do for *Range Practice*. This will require the best work of one or more selected officers of experience, in other words, the work of a selected Board. This Board might meet at the same time and place as the Board for the revision of the Drill Regulation, which, it is hoped will soon be ordered. The work of the suggested Board should result in a Manual of Field Training. The need for such a Manual is a real one.

In twenty-five years actual service with cavalry troops I never have, up to the present year, seen any real attempt made at progressive systematic field training. For many years the months of each year favorable for outdoor work were devoted to drill, and mostly to close order drill. Long ago it was seen that this was wrong; and orders were issued prohibiting more than a certain amount of close order drill. This was the first step in the right direction, but it was a step in the dark. We were told what not to do; we were not told what to do, still less how to do it. In the course of time G. O. 17 came out telling us in general terms what to do. It then remains to learn how to do it.

Our success in garrison training has come by reason of its details having been worked out by thought and experience and this knowledge embodied in Manuals and Regulations followed by orders telling us the days and hours to be devoted to different parts of garrison training and laying down methods to follow. No Manuals of Field Training exist. Brigade

commanders are each year to prepare a course for instruction in field training for the regiments of their brigades.

General James Parker has done this for his brigade and as far as I know is the only officer who has gone into any of the real details of the matter for Cavalry. His course, embodied in several orders and circulars, is a long step in the right direction.

In previous issues of the JOURNAL several of these orders have been published, and cavalry officers who believe in the proper field training of our arm will find them a prolific source of good ideas. One feature that General Parker has introduced into his training is competition and he has at his inspections regularly held competitions between the troops of each regiment. The cavalry owes much to him for this work. As his troops were scattered into small groups, and as he had necessarily to begin at the beginning, I do not think his system has yet reached the desired perfection. His many exercises to teach scouting, attack and defense, etc., are all good; but the fact that troops were to compete in these exercises known beforehand might lead to their preparing themselves somewhat automatically in certain exercises only.

If we had a manual showing the best methods of training scouts, of attack and defense, of managing advance and rear guards, etc., in short the best methods of training in each of the different things we need to know how to do in field training, such a manual would be the same aid to *Field Training* that a good drill book is to drill. It should contain, besides the methods of doing each of the above things, exercises based upon these methods and perhaps in some cases indicated acceptable solutions. These exercises would be a help to even the best officers; to those officers who lack initiative and ability to originate ideas and methods, they would be a Godsend.

In field training, more than in any other preparation for war, the initiative of commanders of all units should be encouraged; but initiative without knowledge or intelligent direction is of little value.

A manual showing good methods of training would not hamper initiative; it would aid an officer by suggesting many things that might not have occurred to him.

Once we get such a manual, the next thing is to utilize the *Field Training* period to the best advantage. For this purpose we need a well thought out systematic, progressive course.

As in drill, this course should begin with the instruction of the smaller units and progress on up to the largest units we can get together, the instruction of each unit being as complete as possible before proceeding to the next one. The instruction of the troop should be finished before taking up that of the squadron, etc.

To attain the best results the course should be general in its nature, should allow the unit commander latitude in its application, should permit of helpful supervision by the next higher commander, and finally should provide for testing from time to time the results of the work done. At times, at least, these tests should be competitive.

About two months of the field training season will be devoted to *Range Practice*. This leaves four or five months for all the other training. Owing to changes of station, maneuvers, inclement weather, etc., considerable more of the time will be taken up, leaving perhaps but three or at most four months. To utilize this time to the best advantage, it should be divided into periods, each for the instruction of a unit in a particular subject or subjects.

An appreciation of the above ideas governed the work in *Field Training* here during the past year. Owing to favorable weather we were able to finish a thorough course in drill by March 31st, at the same time not neglecting plenty of theoretical work. The *Range Practice* season had been designated as May and June. Therefore April and July were given over to the troop, August to the squadron, and September to the regiment.

The troop program for this training was as follows:

APRIL.

(a)

1. Scouts, at least five men per troop.
2. Map making, road sketching.
3. Packing, at least eight men per troop.
4. Advance and rear guards.

5. Outposts.
6. Camping, including use of individual mess kit.
7. Pursuit and retreat.
8. Signalling.

(b) The training will be by troop under supervision of squadron commanders.

(c) At the end of the month a competitive test in these subjects will be given the troops.

JULY.

The program for this month included all the remainder of the subjects of field training mentioned in G. O. 17, such as convoys, attacks mounted, dismounted, and both mounted and dismounted, night attacks, field fortifications, etc.

The tests for the subjects of training for the month of April were as follows:

EXERCISE NO. 1.

Outposts, Scouting and Sketching:

Your troop, two platoons, bivouac at..... The enemy with an equal or superior force, is known to be going into bivouac at..... (about two miles apart.) There are no forces covering your troop. One platoon of your troop is detailed to outpost the line through.....

2. Using not to exceed four scouts and two sketchers, you will reconnoiter the enemy's bivouac and outposts, returning within one hour with report and sketch of the numbers and location of the enemy's troops in bivouac and outpost.

(A similar exercise was given to the opposing troop.)

EXERCISE NO. 2.

Pursuit and Retreat—continuation of Exercise No. 1—The Pursuit. Situation:

A force of the enemy occupies..... A small enemy raiding party was severely defeated yesterday at..... It is reported in bivouac at..... Your troop is bivouaced at this place, having three pack mules for rations, and with out-

post in position. You receive order to attack and destroy the raiding party.

Note.—

1. The load for your pack mules will be furnished by the Chief Packer. (One of the packs consisted of a large box and keg, difficult to pack.)

2. This exercise to illustrate: (a) A pursuit. (b) Packing. (c) Outposts. (d) Advance Guard. (e) Use of Scouts.

A similar exercise, involving a retreat was given the opposing troop; the pursuit and retreat was conducted over a distance of some six miles.

EXERCISE NO. 3.

Camping:

1. Troop equipped for field service, three pack mules carrying field mess outfit with rations sufficient for one meal, including bread, hard or soft, meat, uncooked and two vegetables, coffee and sugar.

2. Troop lined up near its camp site. At signal the troop will go into camp, pitch shelter tents, care for horses, establish camp guard, cook its meal, individual cooking.

3. Time will be taken from signal to make camp to serving of the meal. The methods and results of tent pitching, care of horses, cooking, guard and arrangement as adapted to the ground will be inspected.

4. After a reasonable time Boots and Saddles will be sounded, time taken till the troop is mounted ready to move. Conditions of saddling, packing, etc., inspected.

In all the above exercises troops were carefully marked and their relative standing published.

Similar programs for the squadron and for the regiment have been made and will be carried out with proper tests at the end of each month if the troops are still in the post.

Had there been a well written Manual of Field Training the task of preparing the problems for the daily work as well as for the monthly tests would have been greatly facilitated and would perhaps have been better done.

TRANSPORTATION FOR A CAVALRY REGIMENT.

BY COLONEL W. C. BROWN, TENTH CAVALRY.

IN attempting to make a practical application of the organization tables and recent War Department Orders in loading the baggage of a cavalry regiment on its baggage section, we have encountered difficulties here which seem so certainly to spell *failure* in active operations that we have looked for a substitute which it is believed has practically all the advantages of the scheme set forth in the Tables of Organization while giving to each troop a wagon of its own.

The Tables of Organization provide that the Regimental Field Train shall consist of five wagons in the baggage section and seventeen in the ration section. These tables have not been amended in this respect but General Orders No. 8, c. s., War Department, page 7, states that six wagons are required for the 16,974 pounds of baggage enumerated in that order. This same order gives the total number of wagons in the field train as twenty-two, thus reducing the number in the ration section to sixteen. This division leaves the sixteen wagons, the loads of which are constantly varying, at the disposal of the quartermaster when any wagons can be emptied by the shifting of loads and make them thus available to be returned to the base for supplies.

This arrangement appears in a measure to be the result of an effort to make the scheme adopted for an Infantry Regiment to fit a Regiment of Cavalry, ignoring the fact that in active operations while Infantry Regiments will likely remain intact the contrary usually will be the case with cavalry. At the present moment the Infantry Regiments on the Mexican border are generally kept intact, the cavalry being scattered in squadrons, troops, and even detachments. Its mobility and nature of its duties are in our country opposed to concen-

tration. This is our experience in the past fifty years, and doubtless it will be the same in the next half-century.

Let us first take the operation of the scheme in the rare occasions when the Cavalry Regiment forms a single command and the space on its six wagons is to be divided among fourteen troops. With every effort on the part of Troop Commanders to not to exceed the allotted proportion of six-fourteenths of a wagon load per troop, misunderstandings are sure to result, and the fractions of wagon capacity to be dealt with, whether the whole or any part of the regiment is being considered, are about as inconvenient as could be devised.

Now let us suppose that our Captains looking after their field equipment have arrived at that degree of perfection that none send to the baggage wagons more than six-fourteenths of a wagon load no scheme can be devised which will do away with the inconveniences resulting from carrying baggage over the long distances covering the front of a cavalry bivouac to be loaded. The same difficulties will be experienced when delivering loads at the end of the day's march.

All baggage must be suitably tagged or marked, which is no difficult task, but in spite of every care there is an inevitable mixing up of baggage, with the confusion and loss of temper incident thereto.

Troops "A" and "B" for instance can each get its six-fourteenths of a wagon load on wagon No. 1, but Troop "C" must put part of its baggage on No. 1 and part on No. 2, etc.

An allotment of transportation which it is thought will prove more satisfactory is to give each troop one wagon for baggage and a certain number of days rations; combat wagons to remain one wagon per squadron as at present. There will then remain eight wagons available for rations or grain or both or for general purposes. These could be attached, two to each squadron and two to the Headquarters Troop and Machine Gun Troop or left in one train under the direction of the Quartermaster.

If the regiment be assembled with a prospect of remaining in one place for some days and wagons are required to be sent back to the base for supplies, let all be taken for this purpose except the Combat Train, the wagons of the Headquarters

Troop and Machine Gun Troop and one for each squadron. These five with some help from the Combat Train will carry the baggage as now provided in case of an unexpected move. While normally we wish to give each troop its own wagon the fact is recognized that in active operations the allowance must frequently be reduced. In this case, the first *cut* should be to take wagons from the squadrons, say two from each and one of the two assigned to Headquarters and Machine Gun Troops. The regiment can still carry on its remaining seven wagons its baggage and have the space of one wagon load for rations. Two troops can, without much confusion, carry their belongings on one wagon, but when it comes to putting the baggage of fourteen troops on six wagons or the baggage of a lesser number of troops on the proportionate number of wagons it requires the use of too much arithmetic and calls for an evenness of temper not usually found in the American officer. The next *cut* made will probably be to allow but one wagon per squadron, but troops of a squadron are near neighbors, usually close friends and may be depended upon to get along without friction.

In the scheme set forth in the Tables of Organizations we adopt a scheme at the very outset which makes the regiment uncomfortable *all* the time, whereas by a different arrangement, we might make them comfortable *most* of the time.

A parallel to the Tables of Organization plan may be found in the scheme many years ago proposed by some of the brainier officers in the Army, and put into execution at a number of posts, which consisted in the establishment of post messes. There was no question but what troops were more economically and better fed in this way and that too with less trouble to their captains; but the advocates of the scheme had omitted from their calculations certain characteristics of the American soldier. This individual always had had a company mess, and would have no other, and so great was the dissatisfaction over what was really an economical, and in many respects an admirable arrangement, that after some years trial the project was abandoned practically everywhere except at the Recruit Depots.

Give each troop its own wagon, and that wagon and the mules which draw it are certain of the best care. When it

becomes necessary to cut down on transportation the necessity will doubtless be so apparent to all that it will be submitted to without much complaint and the *cut*, if made in the manner proposed above, will work the minimum of inconvenience to all concerned.

The following comparison of the two schemes is submitted:

Tables of Organization and G. O. No. 8, W. D., 1915:

	Total Wagons.
Combat Train, 1 wagon per squadron.....	3
Regimental Field Train { 6 wagons in baggage section.....	6
{ 16 wagons in ration section.....	16
Total	25

Proposed Plan:—

<i>Troops.</i>	<i>For Baggage and Rations. No. Wagons.</i>	<i>Combat Train. No. Wagons.</i>	<i>Rations and Grain. No. Wagons.</i>
Hdqrs.....	1		2
M. G. Troop.....	1		
A.....	1		
B.....	1		
C.....	1	(1)	2
D.....	1		
E.....	1		
F.....	1		
G.....	1	(1)	2
H.....	1		
I.....	1		
K.....	1		
L.....	1	(1)	2
M.....	1		
	14	3	8

If the proposed plan does not meet with approval, the alternative plan is suggested of giving a wagon to every two troops at the outset, and as the baggage of each troop seems to have been established as six-fourteenths of a wagon load, two-fourteenths of the space on each wagon will be available for rations and grain and fifteen wagons would remain for the ration section.

I do not desire to be considered as recommending this but simply suggest it as a better arrangement than the scheme set forth in the Tables of Organization.



AUSTRALIAN SYSTEM OF UNIVERSAL TRAINING FOR DEFENSE.*

AUSTRALIA is a huge country. It has enormous wealth and illimitable resources; but, relatively, a tiny population. It is a country that is well worth having and defending. Up to the present it has been the good fortune of Australians that their territory has not been the objective of any foe; but it has always been realized that the time might come when it would be necessary to meet an oncoming enemy, and to do this many systems and schemes have from time to time been adopted, and used for longer or shorter periods according to the varying conditions.

Australia has not been uncommon in that there have been spasms of wonderful military enthusiasm among its civilian population, alternating with such slumps as made citizen defense, at is was known in the past, a thing of small utility. That has, we think, all been changed by the introduction of the system of Universal Training for Naval and Military Defense regarding which I have been honored with the invitation of your Commanding Officer to give you some general explanation.

Until quiet recent years it was part of the defense scheme in the States of Australia before federation, and of the National Government in the earlier days of federation, that Australia's isolation was her surest safeguard against aggression, and that the worst we should have to fear in times of war would be a raiding attack by some daring enemy, seeking either to establish a naval base in one of our many deep water, unprotected har-

*An address given by Captain J. W. Niesigh (Retired, Commonwealth Military Forces, Chief Intelligence Officer for the State of New South Wales at the Panama-Pacific International Exposition) at the Camp of Regular Troops, the Presidio, San Francisco, July 30, 1915; Major James G. Harbord, First Cavalry, Commanding.

bors, or seeking for coal at any of our coastal collieries, or intending to hold temporarily some section of country for strategical reasons.

Developments in the East, the sudden rise to conspicuous power of at least one nation, coupled with the ever increasing ability of navies to operate far from their home ports—as very emphatically demonstrated by the voyage of the Russian Baltic Fleet from Europe to Japanese waters, and, later by the world-tour of your own magnificent fleet of battleships under Admiral Sperry—such things as these taught us that times were changing and that with them we must change our policy.

We had hitherto relied upon the theory that Australia could only be attacked after the British Navy had been definitely worsted in distant waters, and with such reliance we provided merely small cadre units of artillery and engineers for the maintenance of forts and other coastal defenses, and our actual defense force was created by voluntary enrollment of citizens organized into units that were in some instances paid for militia service and in others received no remuneration at all.

Whenever there was a prospect of war the ranks of these citizen units filled rapidly, and under the influence of national excitement attendances at drill were remarkably regular; but, war being over, or the threatened emergency having disappeared the energy and enthusiasm for soldiering faded away. Consequently there were recurring periods during which we had an establishment which, speaking truthfully, was not maintained in fact. In other words it was not an uncommon thing for a considerable percentage of the defense force to exist in official returns only. Such conditions did not make for efficiency, nor provide that measure of national insurance which the wealth and pride of our country demanded.

After federation in 1901 the forces which had previously existed under independent commands in each of the states were brought under one general control, and an entire reorganization took place. For a time the results were eminently satisfactory, but after the excitement of the South African War and the Russo-Japanese War had abated, there was again

a falling off in attendances, and considerable difficulty was experienced in recruiting. This brought us up to a period about six years ago when public opinion developed rapidly in favor of compulsory service which, thereupon, formed the subject of political debate and presently became a part of government policy.

A scheme was drafted by Australian officers, notably Colonel James Gordon Legge who is now commanding the Australian troops at the Dardanelles, and was submitted to Lord Kitchener then Commander-in-Chief in India. Lord Kitchener made an extended tour of inspection in the Commonwealth, in a large portion of which I had the honor of taking part. He furnished the Commonwealth Government with a report and recommendations in February, 1910, and in 1911, necessary legislation having been passed, Australia initiated the system by which the youth of the country were brought under an obligation to train for service in the naval or military forces. I would here interpolate that such service is specifically for home defense. Under our Defense Acts no officer nor man may be ordered away on foreign service, and in the event of Australian troops being required for service outside Australia they must be raised entirely by voluntary enlistment. That restriction of activities to the Home-land is an important consideration in the scheme, and in the national policy which is now known as "Lord Kitchener's Scheme."

Now for the scheme itself. It requires that every boy when twelve years old shall commence a course of approved physical training in the schools; at fourteen years of age he has to register for service and then becomes a "Senior Cadet," and is taught elementary drill and the principles of discipline; at eighteen years he passes into the recruit stage of the "Citizen Forces" where he remains for twelve months learning the more advanced work of the soldier or sailor as the case may be; and at nineteen he becomes a full member of the Citizen Forces—the fighting force in case of need. He remains on the roll then until he is twenty-five years old after which he is required, in the twenty-sixth year, to attend only a muster parade, and afterwards passes into the reserves. That is how the force is constituted.

The training is so arranged for that it shall not interfere to any greater extent than is absolutely necessary with the private pursuit of a civil occupation. Generally speaking the attendance required for training is approximately only sixty-eight hours a year divided up into evening parades of one hour's duration, afternoon parades of about two hours and what are called whole-day parades of about four hours. This training is supplemented by voluntary parades and frequently by voluntary camps. With the citizen army, that is those over eighteen years of age, a portion of the training is continuous for ten days in camp as regards infantry and cavalry, or as we call it "light horse," and twenty-one days for scientific corps. It has been argued that this training is not sufficient to ensure efficiency but experience has, I may safely assert, proved the contrary; more especially as the first drafts entering the citizen army had the advantage of the example and steadying influence of the remaining personnel of the old militia regiments which, of course, had to be kept under organization until new the personnel had sufficiently developed to take its place.

Under this system it was estimated that a fighting force of between 80,000 and 90,000 troops would be established and maintained, supplemented, as the trainees reached maturity, by an ever increasing reserve of men who had been through the ranks and passed out of them at the age of twenty-six. This estimate of numbers proved to be exceptionally conservative and is, of course, always subject to the influence of increasing population and the consequent creation of additional training areas under conditions which I will presently explain.

The plan of organization is that each of the six states shall be under the control and direction of a district commandant who is responsible to the minister of defense and the Military Board at the Federal headquarters. Each state, in turn, is divided into brigade areas and the brigade areas into battalion areas, which again are divided into training areas. In each training area there is an area officer, generally a smart young lieutenant or captain but sometimes of higher rank. This officer is assisted by one or two non-commissioned officers of the permanent administrative and instructional staff. The battalion command is exercised in the ordinary way and, of

course, the brigade command, which is held by a permanently employed officer of the staff, follows in the usual course.

The relative commands are exercised upon lines laid down at headquarters and are strictly systematized throughout the Commonwealth, every training area being held responsible for the strict observance of the law and the regulations made under it.

The area officers are not permanently employed and receive a small rate of pay upon the understanding that they are following some civil occupation and that they shall only give to their military duties such personal attention as is required for the proper supervision of those under them, the bulk of the necessarily heavy office work falling upon the staff non-commissioned officers.

The command of battalions and companies is with officers who have either transferred from the previously existing militia or who have in the first stages been specially appointed; but it is intended that, subsequently, as the scheme develops, all commissions shall be filled by promotion from the ranks and entirely upon the qualification of merit.

Owing to the magnificent distances and scattered population in a very large portion of the island continent it has been found necessary to declare some areas exempt from training as, you will readily understand, it would be impossible to bring trainees together in such places in sufficient numbers to teach them efficiently, and the expense of maintaining staffs to travel in the out-back country would be out of proportion to the benefits derived. Furthermore some of the districts such as these I have in mind are so remote from centers of mobilization for military usefulness that residents therein could not be speedily used to advantage in the case of national emergency; but, if required, could quickly be brought into camps of training and drilled into a sufficient condition to form a second line of defense.

The great difficulty we had to contend with in the initial stages was to find the area officers and the staff non-commissioned officers who were to set the ball rolling. To meet this applications were invited from men then serving, or who had served in the permanent cadres or the militia forces, from ex-Imperial soldiers, and others who considered themselves suited

for the positions. Medical and educational tests were applied as a preliminary to weeding out the large number of applicants and those who came through successfully were then put into camp for six months and for that period were continuously and rigorously drilled and trained in every phase of their administrative and executive duties.

The result was eminently satisfactory, and the system has been followed from year to year as the citizens force has increased and the demand for instructors has grown proportionately.

The first school of instruction of this nature concluded in time for the training to be commenced on July 1, 1911, the enrollment of all youths between the ages of fourteen and eighteen having been commenced on January 1st of that year. Now it is necessary for every boy on reaching the age of fourteen to register on January 1st, and to commence his cadet training in the following July, at which period, of course, the boys passing the eighteenth year are drafted on to the recruits and so on.

It will interest you to know how the public took this innovation. There were, of course, opponents of the system. We had our "passive resisters" and we had some of those delightful citizens who call themselves "conscientious objectors" but we were able to meet each case as it arose and to respect the gentleman of conscience by telling him that his son could be made a very useful soldier in several spheres which would not require him to take part in the immediate horrors, to say nothing of the dangers, of war, in other words that we could make good use of him, far from the firing line, in ordnance stores or in a dozen different ways that it is unnecessary to detail in a camp such as yours. Numbers of boys failed to register but it did not take long to discover who they were because each boy who was properly performing his duties became a policeman for his district and refused to shield by his silence his playmate or neighbor who was shirking.

In this way the rolls were quickly completed, and by the imposition of fines, and the enforcement of those fines, parents soon began to realize that it was cheaper for them to see that their sons complied with the law than it was to defy constituted

authority. After the enrollment, again, there were many boys who treated the whole thing as a gorgeous joke; who thought the parade ground was a playground; and who regarded Area Officers and Staff Instructors as fair butts for their juvenile wit and practical jokes. But firmness, tact, and judicious punishments eliminated these undesirable features and indiscriminating prosecutions for non-attendance at drill had a very salutary effect, although, of course, the cleaning up process was by no means rapid. Non-attendance at drill involving inefficiency was followed by prosecution in the police courts, and the imposition of fines as well as the ordering of additional drill generally on the basis of two hours drill for every hour missed with increasing severity where the offense was repeated.

The police court process and the imposition of monetary penalties which fell upon parents often not able to afford the luxury of paying for their childrens' delinquency appealed to the authorities as something that could with advantage be altered, and instead of the publicity of police court proceedings separate courts were instituted, something in the nature of childrens' courts. Instead of fines penal battalions were established in permanent encampments and the drill shirkers were sent immediately upon conviction, to those places and were kept there under very strict control until they had performed the necessary periods of duty and the extras imposed by the magistrate. That, perhaps has had a more salutary effect than any other form of punishment.

Under the Act, necessarily, there are certain exemptions allowed; but they are not numerous. Physical incapacity, for instance, is taken into account, although with restrictions which require the individual to present himself for further medical examination at a stated time or whenever called upon. Also when a person liable for training resides more than five miles from a training place exemption is granted. In all cases of exemption the certificate is liable to revocation at the will of the authorities. It is right that I should explain that I have now been absent from Australia since September of last year, and cannot, therefore, speak with certainty of anything that may have happened since the outbreak of the European

War, but my private advices lead me to believe that Australia's participation in that war has given increased zest to the compulsory training movement, and this, following on the popularity which the scheme gathered as it developed, has made universal training a part of the national life.

Having referred to the punitive action taken in the case of recalcitrant trainees it is apropos that I should tell you that provision is made for the protection of the trainee against hostile employers or other persons who may be desirous of interfering with those enrolled. The Act provides for adequate redress in such cases and there has not been any hesitation on the part of the government in putting the law in motion wherever necessary. For the credit of the country, be it said, there have been few records in this regard.

Universal Training is something that goes into every home. The millionaire's son has no privileges that are not enjoyed by the son of the poorest member of the community. No distinction is made; no favor is shown. Thus, gradually, a condition has evolved by which a lad who has not performed his military obligations is regarded as somebody beyond the consideration and kindness of his fellows, be it in the cricket field or the class-room, and as a person who is not deserving of the favor and smiles of the girls at a picnic or evening party.

In this way the Army for Australian Home Defense is growing in numbers year by year, and in practical efficiency day by day; so that in a few years, if the Kitchener Scheme be adhered to, we shall have an efficient force of all arms and departments. Our Light Horse Regiments—Cavalry, you would call them—are still largely maintained on a voluntary basis, inasmuch as while you can order a man to perform military service it would be beyond reason to compel him to provide a horse. Therefore, the trainee has the option of volunteering for mounted service other than the Field Artillery where the horses are provided by the government.

It is estimated that in the event of mobilization for war the mounted regiments could be rapidly filled. Garrison and Field Artillery and Engineer Units are recruited from among those trainees whose civil occupations fit them particularly

for those branches and some very fine results are achieved in consequence.

I have referred almost exclusively to the military side of training but it must be understood that the same system of training applies also to the Naval Service. Certain stated quotas are detailed to the Navy in the same way as are those for the Army. The Naval trainees receive a proportion of their instruction on shore with occasional drills on board ship, and an annual period of several days sea training on a specially provided vessel. The personnel of the Australian Navy is, of course, a separate organization of permanently employed men, the citizen sailors being only required as a supplement of that Navy on ships which are serving in home waters. As some of you no doubt know the ships of the Australian Navy are now operating in foreign waters under Imperial command.

Apart from the value of the Universal Training System for defense purposes, a moment's thought will lead you to the conclusion that it must have with it enormous social advantages for the community at large. The discipline taught in the Defense Units must be reflected in the conduct of the growing lads and young men in their homes and in the streets of their home cities. The setting up which they acquire in the course of their drill as well as the physical training must have a marked influence on the sports grounds and playing fields of this very sports-loving country. And again, the improvement in the physique and morals of the young men of the country must be handed down with ever increasing marked effect upon the national character.

In this connection it is interesting to note that the initiation of physical training of the twelve-year-old boys in the schools led to a popular demand for similar training for girls. Female teachers took the matter up and requested that they might be taught the drill in order to teach their pupils, and the request was readily complied with so that now there are, perhaps, few schools in which the girls as well as the boys are not being given the advantage of physical culture. The race improvement which must be a part of the evolution of such conditions in a few years when the well trained lads marry girls

who have had this physical training cannot fail to produce a generation with exceptionally fine bodily and mental qualities.

In conclusion, I would like to again emphasize the fact that the measures of defense provided in the System of Universal Training are wholly and solely for defense and not for oversea offense. Our men who are now serving abroad are serving of their own free will; they are nothing to do with the national training system, although I do not doubt that many of the older lads who were seventeen or eighteen at the time of the initiation of that system have volunteered and taken their places in the fighting lines.

Also I should like, as a final word, to say that I trust this explanation I have been permitted to give you of a very interesting experiment in national defense is not intended to be in any way part of a controversy which has arisen in this country, particularly on the Pacific Coast, since I was honored with the invitation to come to your camp.

I have endeavored to tell you what Australia is doing, and, in telling you I have flattered myself that I had a sympathetic audience because of the strong bonds of fellowship which exist, and must always exist, between you people in America and we in glorious Australia.



CAVALRY EQUIPMENT—PAST AND PRESENT.

CAPTAIN EDWARD DAVIS, THIRTEENTH CAVALRY.

HUMAN nature seems to fortify the confidence of each successive generation by giving it a marked degree of self sufficiency. This innate feeling of superiority is wisely tempered by the trait of curiosity as to the deeds of the past. Where this curiosity leads a people to add the lessons of the past to their natural self-confidence, we find a nation characterized by thoroughness. Without that addition the product is merely a spirited superficiality.

The American Cavalry, as an institution, can claim no vastly extended experiences, as compared with European Cavalry, but it can claim a series of intensified activities, productive of valuable lessons, peculiarly applicable to our national necessities in so far as they can now be foreseen. Our predecessors in the mounted service were actuated by a desire to improve conditions and they made many experiments with a view to progress. The documents pertaining to their efforts regarding equipment include interesting letters, drawings and specifications. Some of the ideas thus proposed developed into service equipment; others, through lack of practicability, or because of insufficiency of current scientific attainments, or perhaps on account of commercial or other personal hostile influences were destined to remain undeveloped or to await a more favorable period. Ideas incapable of application at one time, became sufficient at a later date, perhaps through a new discovery as to metals, or by reason of the progress of mechanical appliances, such as tools, dies and machinery.

The history herewith presented, in the form of extracts from old papers and reproductions of old drawings, will interest those who value the experiences of their predecessors and will be pleasing to all who confess the pardonable curiosity of the antiquarian.

THE GRIMSLEY EQUIPMENT.

Prior to 1840 the available record is silent as to the officially recognized type of equipment, but about that time the "Grimsley" product was authorized. Colonel S. W. Kearney is reliably mentioned as the originator of some of its best features, but it was improved upon and actually manufactured by Mr. Thornton Grimsley, of St. Louis, Mo. In those days, in fact until recently, it was customary to give to a saddle the name of its inventor or manufacturer. In 1847 a board of officers recommended formally the adoption of the Grimsley equipment. The members of the board were Brig. Gen. S. W. Kearney, Q. M. General Thomas Swords, Major P. St. George Cooke, 2d Dragoons, Bvt. Lieut. Col. C. A. May, 2d Dragoons, and Captain H. L. Turner, 1st Dragoons.

The Board of 1847 described the Grimsley saddle as follows:

"Combining strength, durability, peculiar fitness to the horses back and convenience for military fixtures, this pattern, more than any other yet furnished for Dragoon service, gives an erect posture and easy seat to the rider, at the same time that little or no injury is done to the horses' back on the longest marches. Some of the members of the board have had the fairest opportunity of testing the merits of this saddle, having used it on marches of more than 2,000 miles in extent * * * . In outward appearance this saddle resembles more the French Hussar saddle, than any other with which the board is familiar: * * * the forks of the high pommel and cantle are, in every case; and under all circumstances of reduced flesh, raised above the withers and back bone of the horse. * * * Quilted seat, sewed down, and leather skirts to protect the blanket (on which the trooper rides on service), and the pantaloons of the rider, from the sweat of the horse. Also small underskirts to protect the sides of the horse from girth buckles.

Stirrups: Brass, and of same pattern as those furnished the First Dragoons in 1834."

The bridle is thus mentioned: "Of the form and pattern submitted by Lieut. Col. May with an "S" bit, having a strengthening cross bar connecting the lower extremities of the

branches, etc." The halter was "the same pattern as that furnished the First Dragoons in 1839, and since.*

The Grimsley pattern persisted somewhat unmolested for ten or fifteen years, a period marked by long marches across the plains from the Missouri River to the Rocky Mountains and from our northern boundary to Old Mexico. It made friends and created opponents. An alteration in the pommel and cantle arches, making each less erect, brought forth the following comment in 1855: "Whilst the original model, by the uprightness of the cantle and pommel, confine the soldier to a fixed and more perfect position, the saddles recently re-

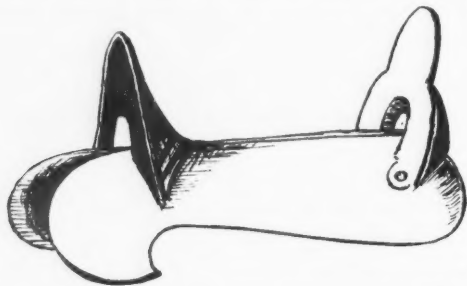


PLATE I. THE TREE OF THE GRIMSLEY SADDLE.

ceived, by the unnecessary sloping of the cantle and pommel, admit a freedom and play in the seat which not only fatigues the rider, but allows him to throw his whole weight at times upon the very slope of the cantle, etc."

Colonel Albert Sidney Johnston, Second Cavalry, in 1856 viewed unfavorably certain adverse criticism of the Grimsley saddle, stating: "I have to observe with regard to the remark in the report that 'with the Grimsley saddle a large proportion of the horses' backs were made sore,' the sore backs might rather have been produced by the ignorance of the soldiers of the proper method of adjustment, than from any fault of the saddle. The men had but little experience before the march in

*The specifications indicate almost no change in the design of this article until 1912. The blanket was of dark blue wool, the girth and surcingle of indigo blue, worsted webbing. A dark blue cloth valise was attached to the cantle, each end of the valise having "a brass plate, with beaded edge," and with the "letter of the company one inch long raised thereon."

riding, and the greater portion of the horses were not much accustomed to the saddle and were untrained."

Captain Earl Van Dorn, Second Cavalry, in 1857, wrote from Camp Colorado, Texas: "In every scout or march * * * in which the Grimsley saddle was used, I never failed to have sore backed horses (withers generally) in proportion to the distance I have marched over, or the kind of weather I had to encounter."

Colonel E. V. Sumner, First Cavalry, remarked in 1858: "I agree with Major Sedgwick in this report but I am convinced from long experience, and close observation, that the Grimsley saddle and bridle (old pattern) are the best and most durable, neatest and cheapest equipment that we can get for the Cavalry. With sufficient care, this saddle will rarely injure a horse's back, and, without care all saddles will injure them. I have used one of these saddles since 1844, and I consider it by far the best saddle I have ever had. The exceptions that are made to the McClellan equipments by those recommending them, are sufficient to condemn them."*

Captain Thomas J. Wood, First Cavalry, wrote from Lecompton, Kansas Ty., in 1856, as follows: "From an experience of a number of years, during which I used the Grimsley saddle, and had the fullest opportunity to observe its use by the enlisted men, I unhesitatingly state that it has not a single requisite that a cavalry saddle should possess. It is too low and narrow in the gullet—consequently it almost invariably wounds horses on the withers and loins. * * * The bars separate and spread out, and the consequence is, that much of the weight on the horse presses immediately on his spine. * * * So defective is the shape of this saddle that a few days hard work with it * * * almost invariably causes serious injury to the backs of three-fourths of the horses in a mounted company. * * * It is double as heavy as there is any necessity for its being."

Captain Thomas Claiborne, Regiment of Mounted Rifles, wrote from Camp Crawford, New Mexico, in 1856: "The Grimsley saddles made in 1848 and used by the Rifle Regiment

*The McClellan equipment was at that time being used experimentally.

in the march to Oregon, were of most excellent character, as far as material and workmanship were concerned. In 1852-53, while on two trips to the Rocky Mountains, I had also good opportunity to judge Grimsley saddle. The saddles were bad and numerous horses were rendered worthless by them. * * * However, I must say, that after full experience I believe the Grimsley saddle to be the best I have ever used."

THE HOPE OR TEXAS SADDLE.

This saddle was used experimentally during the period 1855-58. While a drawing is not available, its features appear in some of the following extracts.

Captain George Stoneman, Second Cavalry, stated at Camp Cooper, Texas, in 1857: "Hope's, as compared with Grimsley's fits the horse much better forward, but aft not so well, and the withers are relieved from much liability to injury, a very great desideratum. * * * The cantle, that worse than useless protuberance, particularly for short legged men, is dispensed with, * * * instead of the quilted, padded, semi-soft, hot, pile engendering heat, we get a smooth, hard, open, cool locality for that part of the trooper which suffers most, particularly with tyros in equestrianism, and the dragoon when he is at the end of his first enlistment is little more * * *. The bars appear very well shaped, and better in front than in rear. * * * To use a nautical expression, with the present bearing and the usual cargo aboard, the craft is loaded too much by the stern. * * * Whoever invented Hope's saddle hit very nearly the California vaquero saddle, and wherein he differed from it he has failed."

Colonel A. S. Johnston, Second Cavalry, made the following remarks regarding the Hope saddle, at San Antonio, in 1856: "The tree conforms generally to the horses' back, and readily adapts itself to his different conditions. It's equipments are simple consisting of two pouches, wooden stirrups and stirrup leathers, the Mexican girth, etc. * * * The saddle with these equipments weighs fifteen pounds and costs \$23.00."

Lieut. Col. J. E. Johnston, First Cavalry, in camp at Lecompton, Kansas Ty., in 1856, remarked: "All the officers in the field in Kansas, who have been able to obtain it (Hope's

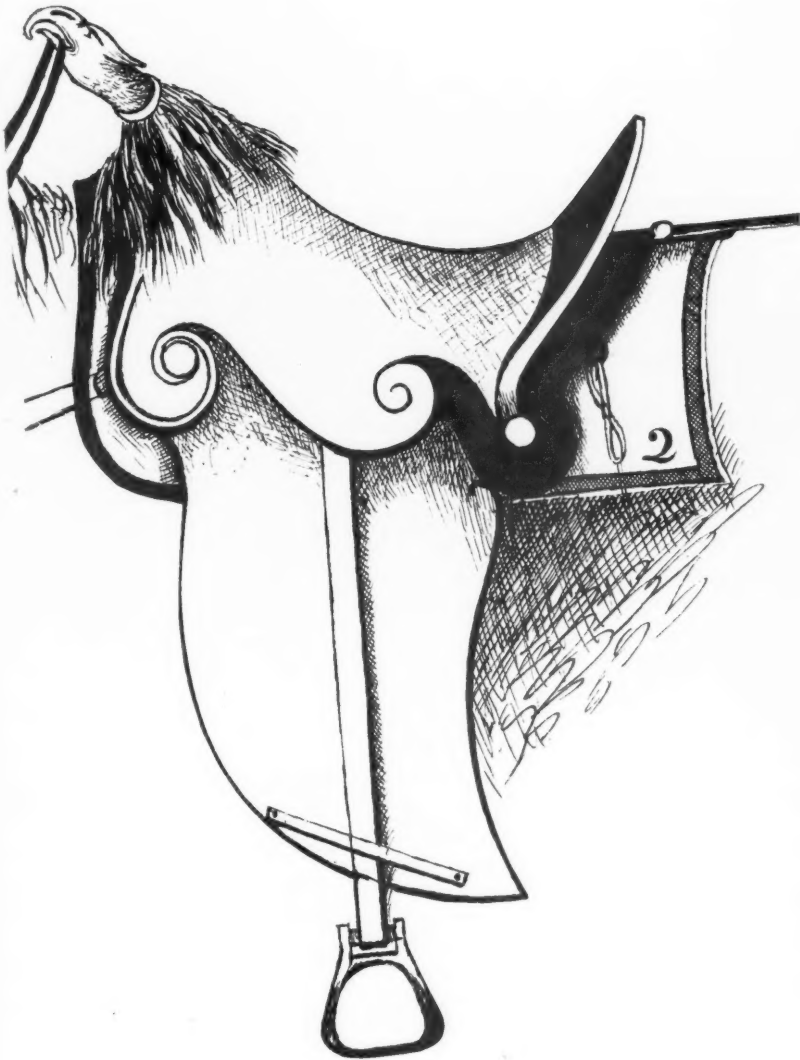


PLATE II. THE VAN DORN SADDLE.

saddle) use it, except that they have the California tree instead of Hope's. * * * I think it is better for our service than either of those now furnished by the Government."

Captain Earl Van Dorn, Second Cavalry, at about this time remarked as follows regarding his use of the Hope saddle: "I marched one hundred and thirty miles at a trot in two days, and a few hours, in an incessant fall of rain in which everything was saturated with water. * * * Not one horse was injured by the saddle." Also, "I marched, in little more than a month nearly 700 hundred miles over an exceedingly rough and mountainous country and although I lost thirteen horses by exhaustion, from want of sufficient grass and good water, not one was injured in anyway by the saddle." However, Captain Van Dorn objected to the finish of the saddle, saying: "I see no reason for following the uncultivated conceit of the Mexicans and attaching a parcel of dangling leathers and strings that can be of little use. * * * The leather hangings to the stirrup are superfluous and ugly. The soldiers' boot and thick stockings should be protection enough for his foot. As far as my taste is concerned, I don't like the finish of the saddle at all."

Captain Van Dorn suggested a saddle conforming in design to the tree of the Hope saddle but with the cantle not quite so high. * * * and "the pommel should be a massive brass aegle head, with beak open to hold reins, and a fall of horses' hair from a ring around the neck * * * the stirrup should be a deep one and made of brass."

THE JONES SADDLE.

Lieutenant Wm. E. Jones, of the Regiment of Mounted Riflemen had been impressed with the defects of equipment while on a march "from the frontiers of Missouri to Oregon, in 1849." The horses started in good condition, using the Grimsley saddle but "before we reached our destination, scarcely a company could mount one man in ten." "Frequently were seen horses lying and groaning for hours in agony from injuries unconsciously inflicted 'by the Grimsley saddle.'"

The Jones saddle, patented in 1855, was one of the first American efforts to secure lateral adjustability of side bars. From the drawing it will be seen that the cantle and pommel

arches were each composed of two metal pieces, the joint secured by a rivet. The motion of the portions of each arch was controlled by a rod and the side bars could be moved closer together or further apart at either end, or both, and the distance between them fixed at will. The side bars were fastened to the ends of the arches by hinges, thus permitting various degrees of slope. The attempt was an ambitious one but the mechanical resources of the day were insufficient to the necessities of the device. However, the saddle did very well and received much praise.

In 1856 practically all the company commanders of the Regiment of Mounted Riflemen, united in praising the results obtained by the use of the Jones saddle during a march from San Antonio, Texas, to Camp Crawford, New Mexico, a distance



PLATE III. THE TREE OF THE JONES SADDLE.

of nearly 800 miles. Some of these officers referred to the Grimsley saddle as being inferior, other praised it, although claiming some superiority for the Jones saddle.

Captain Wm. Steele, Second Dragoons, at Ft. Laramie, in September, 1855, remarked: "After the experience of the past summer, I am of the opinion that the principle of the saddle patented by Lieutenant Jones is a good one and worthy of adoption in the service. Since the 11th of June, I have marched 1,300 miles using the two saddles furnished to my company. One of them was stolen by a deserter after about 1,000 miles travel."

Captain Alfred Pleasanton, Second Dragoons, at Fort Pierre, in 1855, reported that two of Jones saddles "used in the company, during the past summer are now unserviceable.

* * * The Grimsley saddle which have undergone the same wear are still in good serviceable condition."

Jefferson Davis, Secretary of War and his successor in that office, John B. Floyd, expressed interest in Jones' saddle and 300 of them were authorized for experimental use in 1857.

THE CAMPBELL SADDLE.

Although the specifications of this saddle are not obtainable it is known that the inventor, Daniel Campbell, sought to obtain adjustability, and possibly other advantages, by using springs in the tree. During 1855-6-7, the First and Second Cavalry used this saddle, several hundred having been issued for test.

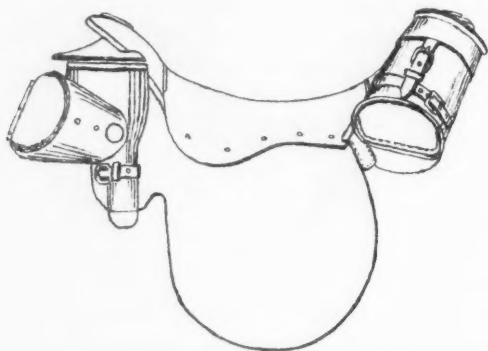


PLATE IV. THE CAMPBELL SADDLE.

Writing from Leecompton, Kansas, Ty. in 1855, Captain W. D. De Saussure, First Cavalry, remarked: "The Campbell equipments were issued to "F" Company, First Cavalry, five months ago and have been used ever since, in the field, continuously. I much prefer this saddle to the Grimsley saddle now in use in the mounted service. It is much lighter and certainly less liable to injure the withers and backs of horses. * * * The 'Moss Rug' (saddle pad) is a failure, being too hard and soon destroyed."

Major George H. Thomas, Second Cavalry, at Fort Mason, Texas, in 1857, expressed the opinion that "the Campbell saddle tree is the best which has ever been tried in our mounted

service. It is strong, light, and, with its proportions, can be easily fitted to any horses' back so as not injure it."

Other officers spoke similarly with regard to this saddle, while still others complained that "the springs of the pommel and cantle" had given away and that numerous horses backs had been injured. "K" Company, First Cavalry, used this saddle on a continuous march of about 1,000 miles. The "Moss Rugs" (saddle pads) which were also used about this time did not give satisfaction; the blanket was preferred.

THE MCCLELLAN SADDLE.

During the period when the Grimsley, Hope, Jones and Campbell saddles were in use, Captain George B. McClellan, First Cavalry, returned from Europe where, as one of a commission of officers, he had observed the operations in the Crimea, and had also made an extensive study of the armies of Europe. He submitted the model of a new saddle and suggested changes in other articles of equipment. In a letter referring to these models Captain McClellan stated under date of December 25, 1856: "I cannot pretend to say that this equipment is by any means perfect, but I feel safe in saying that it is an important step in the right direction; that it is not a copy of any European model and that it is superior to any equipment in Europe." At the time of its proposal and since, the origin of the McClellan saddle has been vaguely characterized as "Crimean," "Russian," "European," etc. However, although Captain McClellan's letter above quoted states that his saddle "is not a copy of any European saddle," an examination of other statements made by him and a comparison of manufacturing specifications has led to the conclusion that the McClellan saddle tree was suggested by the saddle invented about that time by Captain Cogent, then director of the saddle factory at Saumur.

A Board of Officers convened in 1857, examined the equipment proposed by Captain McClellan and, after making certain alterations, recommended an issue to the service for experimental purposes. Among the alterations the following were noted: "The saddle tree not to be covered over the seat with leather;" the "leather foot guards on the stirrup shall be dispensed with;" "the sweat leathers to be dispensed with."

The McClellan equipment received favorable comment, although a number of experienced officers opposed it. Practically all the officers of the Second Dragoons stationed at Camp Floyd, W. T., in 1859, expressed a desire to have that regiment equipped with the McClellan pattern. A defect in the method of attaching the bits was generally mentioned.

Captain G. H. Stewart, First Cavalry, who favored this equipment, remarked that he had used it on a march from "Fort Leavenworth to Utah and back, a distance of over 2,000 miles." He said further: "The saddle should be covered with rawhide instead of leather. A light crupper is indispensable especially in a very hilly or mountainous country. * * * The saddle bags, or valises, furnished, were constructed, and also attached to the saddle, in such a manner as to injure the horses' back, and could not be used."

Another Board of officers was convened in 1859 to "examine into the subject of Horse Equipment." Among the members of this Board were Colonel P. St. George Cooke, Second Dragoons, Lieut. Col. Robert E. Lee, Second Cavalry, and Lieut. Col. J. E. Johnston, First Cavalry. They considered the various articles then in the service and finally recommended equipment based principally upon the McClellan models, modified by the Board. A hair girth was first decided on; then the Board changed to webbing. Saddle bags were accepted, as were also the "wooden stirrups with leather shields."

The bridle was to be of black leather and "the saddle to be russet leather throughout," but the Secretary of War would not adopt the recommendation as to russet leather.

Disapproval of the Board's decision was expressed by its President, Colonel Philip S. George Cooke, who dissented from the main conclusion of his colleagues, and called attention to the merits of the Grimsley equipment. He remarked: "It is impossible that men should agree; any new Board would change any established equipage: but it is confidently believed that that now established unites the largest suffrage in its favor."

However, the McClellan equipment was adopted and served satisfactorily for many years. Modifications were made from time to time and it is thought that the shape of

the under surface of the side bars may have departed from that of the original model. In the course of years such a change might naturally have come about. Some of our experienced cavalry officers believed it probable. General Mordecai in relating his acquaintance with the subject from an Ordnance Officer's viewpoint once said: "When I took command of the Leavenworth Arsenal in 1870, saddle trees were being covered there and I had to throw out many ill shaped trees. In 1874, on the Cavalry Equipment Board, I went over, at Watervliet Arsenal, a large number of trees, to select a few that might, in the opinion of the Cavalry Officers, answer for models, and from them the drawings in the report of that Board were made."

THE WHITMAN SADDLE.

After twenty years service the McClellan saddle was discarded and the Whitman saddle substituted, in the recommendation of the Equipment Board of 1879. They remarked: " * * * the Board, while remembering that the McClellan tree has been of great service, is satisfied that a change is now necessary. This conclusion is due in a measure to the experience of the Board, but chiefly to the opinions of a great number of officers who are riding saddles of various kinds. * * * The Board has endeavored to find a suitable saddle combining the merits of the various trees now in use. This, it is believed, has been done in the selection of the Whitman tree."

The Chief of Ordnance opposed the recommendation of the Board, calling attention to the fact that "42,000 new McClellan saddles were on hand, left from war supplies." General Sherman, commanding the Army, recommended the adoption of the Whitman saddle for general use, after "the present stock of McClellans' is reduced below 20,000." The Secretary of War directed that the Whitman saddle "in future manufacture be adopted as the model." Later, the Whitman saddle was issued to some of the cavalry regiments, but it did not firmly establish itself to the exclusion of the McClellan, which continued as the regulation type.

THE WINT SADDLE.

During the early '80's, Captain T. J. Wint, Fourth Cavalry, designed a saddle which he believed would be less injurious to the horses' back than the McClellan. Long experience as a cavalryman and peculiar aptitude for solving the practical problems of the mounted service combined to give Captain Wint's opinion great weight. He sought to gain lateral adjustability of side bars, by designing the cantle and pommel arches so that they were, in effect, connecting arms, so curved

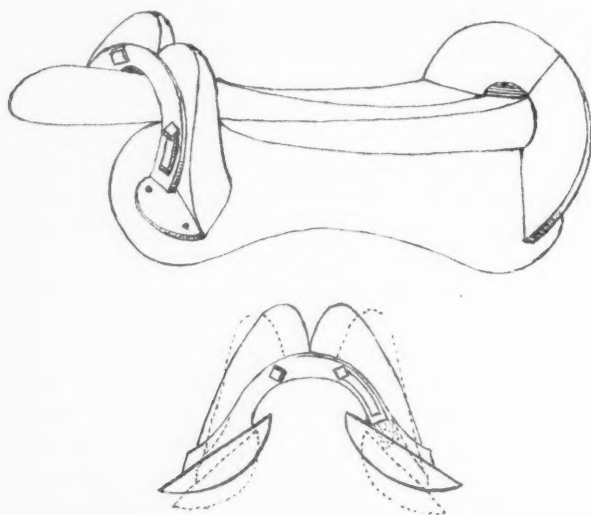


PLATE V. THE WINT SADDLE.

as to form the true arc of a circle, and made so that the metal arms would slide upon each other, thus causing the angles of the side bars to correspond with those of the horses' back, without materially opening or closing the space between the upper edges of the side bars.

Captain Wint did not care to urge the adoption of his saddle and it had no service test save by several officers. Of these, one now retired and another still on the active list, have praised the saddle after many years use. While the device undoubtedly was a step in the right direction, a service test

upon a large scale probably would have proved that the bolts and nuts designed to clamp the arms of the arches together would have worn out too rapidly. As yet, we have found no metal which will stand up under such wear.

MODEL 1912 EQUIPMENT.

Dissatisfaction with the McClellan type continued to assert itself and finally the authorities decided that a complete change of the equipment was probably desirable. A board of officers was convened for this purpose in 1910. They made an exhaustive study of the subject, assisted by reports and recommendations offered by all officers of the mounted service who were sufficiently interested in the subject, about 400 in all. They sought principally a service saddle which would reduce the sore back evil to a minimum; a method of carrying the rifle which would contribute to the same end and properly serve its main purpose; an assemblage of other equipment into a pack which would be light, tight and noiseless, and also comprehensive as to its components. The equipment recommended by that Board is believed to be the nearest possible attainment to the ends sought; that is to say, the principles adopted are correct and no mechanical absurdities or impossibilities are included in the devices produced. That there are defects in some of the articles is necessarily true, because a Boards' work has the limitations of the laboratory phase, even though special marches are made in preliminary tests. Actual use in the service, involving considerable quantities, is the only real test of any equipment. During the past half-year, or more, several squadrons have used the new equipment in daily service, three of these squadrons, at least being stationed on the Mexican Border where we find our nearest approach to campaign conditions. The result of the experience of these border squadrons has been an opinion from them favorable to the new equipment, with reasonable exceptions as to minor defects. The curing of these defects will be attained in due course.

THE BOARD OF 1915.

In keeping with precedents of equipment history a Board will now proceed with a revision of the new type of equipment. The function of the new committee is logically that of corresponding Boards, similarly appointed in the past, that is to say, the function of correction and revision not rejection and re-creation, because of the latter method there is no end and man desireth some peace and permanence here below.

It is merely speaking in the light of facts when one states that the Board of 1912 made by far the most exhaustive study of this subject ever made in this country. Their report contains the facts ascertained; an array of data that, fortunately, he who runs may not read; he will have to stop and actually get thoroughly acquainted with it. The Board of Revision equipped with all the data heretofore accumulated, and thus spared the necessity of going over ground already scrutinized, is entitled to another essential advantage, or rather, a business right. They should be authorized to visit troops actually in the field, using the new equipment. Seeing, in this matter, is believing. Passing through the equipment of such a troop, one observes with accuracy the bearing of all straps, buckles and metal parts, discovering an excess of wear here, the insufficiency of an adjustment there, an unnecessary weight of metal or faulty cross-section in another part, all developed by that king of critics, actual use. Remedies are apparent in some cases and already improvised in others. In short, the close scrutiny of the working equipment, in quantities, and with great attention to detail, is an absolute essential for which no other kind of information can possibly be substituted.

General Cooke, said, as we have read, on this very subject: "It is impossible that men should agree; any new Board would change any established equipage * * * ." Of course there is a great deal of truth in that remark and it applies to many army matters other than equipment. It is also true that the service is developing now a self-protective spirit of enlightened conservatism which urges all concerned that there be made only such changes as are absolutely necessary.

With the above spirit of conservatism in mind and fully recognizing the seriousness and correctness of this opposition to needless change, I would point out, in the light of certain special experience, a few alterations which ought to be made in the new equipment and which can be made at no great expense.

THE SERVICE SADDLE.

Opinions, checked as to source values, and based on troop records, indicate that this saddle will save horses, which means in service, more troopers present and more rifles on the line in each organization. The horse side of this saddle is almost identical with that of the British Model 1910, including the adjustable feature, and we know that more favorable cavalry news has thus far come out of the British Zone in Flanders and France than from any other European source, especially as to horses' backs. The men who have ridden the saddle for hundreds of miles seem content with the comfort of the seat. It would improve the saddle, however, to make the seat larger, with a more extended "lowest part." Some would lower the pommel and cantle arches, but I deem this very hazardous. As now designed we have a sure clearance for the kind of horses we are certain to get in time of war. I prefer the cantle as originally recommended by the Board of 1912 without the protuberance which grew later. In short, give the seat more length and such change of curve as may seem desirable, but do not change the side bars or the height of the arches. The trooper is not "too far above his work" in this saddle, although some have concluded that he is. His height above the horse as compared with other covered-seat saddles, is best determined by actual measurement. Furthermore, other considerations cannot be made to depend entirely upon this particular factor.

The sharp tread stirrups should be replaced by a similar steel stirrup with a flat tread. The marching trooper in time of war will gain more comfort from the flat tread than he will from some of the refinements of equitation. The stirrup loops need not be as heavy as they are; reduce the cross section. The loops, if moved forward a trifle, will be more practical as to comfort, although less correct in theory. A further reduction

in the thickness of the stirrup straps is not necessary; well cared for, they are sufficiently pliable and very serviceable. If the girth straps are shortened and the girths lengthened we will get an easier adjustment and help the lazy man, thus helping everyone else.

THE OFFICER'S SADDLE.

This has had a limited test and is a very good saddle. Some hasty criticism has been hurled at it. My remarks as to the service saddle here apply. However, the question of the officers' saddle is, with us as in other armies, capable of separate treatment. Our special case is this: Our new spirit of interest in riding comes from the Mounted Service School, a worthy, deserving and successful institution. The school has used for years only the Saumur type of saddle, recognized as an excellent saddle for use on officer's mounts. Officers have gone to the school quite indifferent as to its methods and have, with few exceptions, come away with a spirit of enthusiasm and solid faith. They naturally believe in the saddle which is a part of the system by which they were rejuvenated or reconstructed. It would be entirely consistent to recognize this type of saddle as our "officer's saddle," and that procedure would really be in the nature of avoiding a change for many officers—"a consummation devoutly to be wished."

THE BLANKET.

It seems definitely proved that no saddle pad exists fit to supplant the blanket. We should, however, endeavor to secure a blanket of the superior texture, as to ventilation, possessed by the English, French and German Cavalry. Their blankets have a coarser "feel" and appearance than ours, but are just as well or better woven.

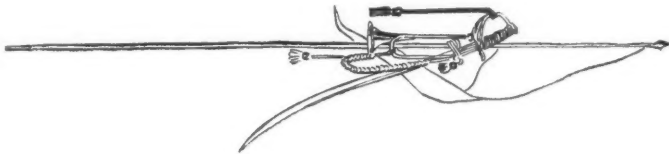
THE RIFLE CARRIER.

The rifle, in the new equipment, hangs in exactly the right place. The principle is absolutely correct. The inconvenience and strain of its carriage are divided in proper proportion between the man and the horse with no real dis-

advantage to either and with due allowance for the fighting moment. No one who has studied the American closely will attempt to hang the rifle entirely on the troopers back. To put the rifle as now manufactured, under the trooper's leg would be to render useless most of the splendid general progress made in equitation. Besides, the rifle, hanging as in the McClellan equipment, exerts a violent pull in a direction at right angles to the median line of the saddle, at every step of the horse, flopping and jerking, and causing pommel sores. There will doubtless be improvements in the mechanical details of the 1912 carrier, but its principle ought not be disturbed.

OTHER ARTICLES.

There are other modifications of minor importance which need not be mentioned here. The Board of Revision will finally remedy most, but probably not all defects. Complete settlement of the new equipment will require a few more years. It has always been so, in cases of large improvements, and it always will be so. The work of those especially attending to these matters, from time to time, may be accepted as earnest and diligent but the results will not come speedily.



EXTRACTS FROM A REGIMENTAL SCRAP BOOK.

BY SEV. H. MIDDAGH.

"Not all of war is made up of death and suffering; where the good soldier rides there are acts of mercy found, and deeds worthy of any day of chivalry."—SWIFT.

IT is seldom we hear of the service of a military organization, other than that during hostilities involving engagements with the enemy, referred to more fully than in the foregoing true and forcible statement.

It was my fortune, at the opening of hostilities with Spain, to belong to a regiment which failed to come in touch with the enemy during the subsequent war, with the exception of one of its troops. Still it performed valuable service during the period between the declaration of war and the time when the island of Porto Rico—its field of operation—was turned over to a civil government.

During the brewing of that trouble, conditions were carefully watched by its officers, many of whose entire commissioned service had been spent with the troops in which they had worked their way to a captaincy. Among their following were men who had joined with them, men who had passed the better years of their life in promoting the efficiency of their respective troops; a lithe, active set, cheerfully taking the hardest kind of knocks incident to the hard work performed during the Civil War and the twenty or more hard years of Indian campaigning which had followed. Among them were found men commenting on the efficiency of the regimental pack train, an organization that was fast becoming a thing of the past, praising the traits of their favorite mule and using the terms "*macho*," "*sencero*," "*cargo*," and "*cagador*," with the familiarity of the muleteers in the days when the pack train was introduced in California

from the Andean slopes of Chili and Peru. In addition to the packers there were found to be as good teamsters as ever handled the lines from the seat of an escort wagon, or guided a team with a jerk-line.

The description of the service of these men is a difficult task and it is believed that in giving some idea as to why they failed to see active service, together with a description of the country and its people as found and understood by them and leave the reader to compare the country of that day with that of today, will come nearer to giving a clear understanding of that service than any other method.

It was in February, 1895, when the natives of Cuba, for the sixth time in fifty years rebelled against Spain and founded a Republic. The war deeply interested our people as upwards of \$50,000,000 of American money was invested in various enterprises on the island which lay at our very doors, while our yearly trade with Cuba was valued at \$96,000,000.

Two years later a large part of the island had reverted to a wilderness, the people by order of Genral Weyler, having been driven into the towns where they were dying of starvation and our country began to send them food and medical aid.

* * * * *

Prior to the demand of our government in 1898, that Spain relinquish her control in the Island, Congress had appropriated \$50,000,000 for strengthening our defenses and buying ships and munitions of war. In the interim between that time and actual hostilities, efforts had been made to secure material for military operations on a more extensive scale than had been done in former years.

This proved a difficult problem. The great amount of war material in possession of the government at the close of the Civil War, had been sold or used up by issue to the militia or to the regular forces that had been engaged in operations on the frontier for the last thirty years—a duty from which our regiment was enjoying a well earned rest—while the fact was, we

had a very small army, 25,000 men, with war material sufficient only to equip that force and furnish it with a small amount of ammunition. The tentage, transportation, and camp equipage was insufficient for any important military operations.

By an Act approved April 26, 1898, this force was increased to 65,597 enlisted men, while an enlistment of 10,000 men "possessing immunity from disease incident to tropical climates" was subsequently authorized. The raising of this army was to cope with the Spanish Army in Cuba, estimated at 150,000 men of which 80,000 were reported efficient for military service. There were two serious obstacles to be avoided however, one was the placing of an army on the Island of Cuba before our Navy controlled the Cuban waters, the other was the putting of an army on the island at a time when a large number of men must die of a disease that had prevailed in that country for the past one hundred years.

On April 15th the regular infantry was ordered to New Orleans, Mobile and Tampa, preparatory to an immediate movement on Cuba should war be declared. Spain severed diplomatic relations with us on April 21st, war began on that date as declared by Congress a few days later, and on May 10th, the regular cavalry and artillery were ordered to Chickamauga and Tampa. Subsequently 70,000 men were ordered to Cuba, and commissary stores for ninety days and thirty days forage were directed to be concentrated at Tampa, where the large amount of supplies and war material were scattered along some forty miles of track, owing to the absence of depots and facilities for handling.

It transpired, however, that none of the movements on Cuba were to materialize for some time, the want of proper equipment and ammunition rendering them impracticable. A strong expedition consisting of 5,000 men had also been organized to move to Tunas on the south side of the island, but when fully prepared was delayed on account of the movement of the fleet of Admiral Cerveras, from the Cape Verde Island to the waters of the West Indies.

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In May, 1898, for the second time in its history, our regiment moved from Texas to participate in an international war, the troops leaving their stations and proceeding by rail to New Orelans, La., at which place the regiment, with the exception of Troops F, was mobilized, going into camp at the Fair Ground as a part of a Provisional Brigade under Brigadier General Snyder, U. S. V., until May 24th. On this date, it broke camp and proceeded enroute to Mobile, Alabama. Headquarters and Troops "A," "B," "E," "I," and "K," leaving New Orleans on May 25th by transport, while Troops "C," "D," and "H," proceeded by rail, "C," and "D," under command of First Lieutenant Jessie McI. Carter, leaving on the evening of the 24th and Troop "H," under command of Lieutenant Alonzo Gray, the following evening. Troop "F," commanded by Lieutenant L. W. Cornish, having moved by rail from Fort Brown to Point Isabel, Texas, proceeded by steamer to Mobile, joining the regiment June 2d.

The Fourth Army Corps, to which the regiment was assigned, was camped about five miles from Mobile in an open piney woods, with abundance of room for evolutions and a bounteous supply of pure water. The health of the command was good; measles made its appearance early, but never spread to any serious extent. The regiment, however, did not remain long enough in this camp to experience any of the unpleasant conditions existing prior to its arrival or those predicted for the future.

On June 4th it proceeded by rail to Tampa, Florida, arriving in time to see the Cuban expedition pull out on flat cars as it ran into the camp of the U. S. Forces at 7:00 A. M., June 7th, our men congratulating themselves that they were in time to join the expedition and for many days they had hopes of doing so. We were on the ground and for a week after, the Fifth Corps were embarking on transports at Port Tampa, while Major General Coppinger was organizing the remaining troops at Tampa and Port Tampa into two divisions of infantry and a provisional brigade of cavalry.

The orders for the movement taking place on our arrival had been given on May 30th, one month and nine days after the declaration of war. It was then expected that the transport

engaged would convey some 25,000 men, but it was found that many of the steamers were not suited for transport service, having been built for freight and not properly equipped for conveying troops and munitions of war.

The orders were that the expedition sail on the 8th of June, but a report having been received that Spanish war vessels had been seen in the Nicholas Channel, the movement was suspended until June 14th, on which date the expedition consisting of 803 officers and 14,935 men finally sailed, leaving behind 10,000 troops owing to insufficient transportation; the Fifth Cavalry being numbered among the 10,000.

Here we severed our connection with the Cuban Campaign.

* * * * *

It having been supposed that our stay at Tampa would be short, a camp had been selected convenient to the railroad and without special regard to sanitary conditions and it transpired that, after the hustle and uncertainty of the first two weeks, we settled down to duty incident to that time in what was soon to become a fever stricken camp.

While in Florida, 395 recruits were assigned and 500 horses were received, and in addition to the usual duties—troop, squadron and regimental drills—there were held recruit instruction and the breaking of the new horses, every effort being made to prepare both for the active service we expected to be called upon to perform at a moment's notice. Time was not thrown away in this respect and drills in one form or another were in progress from breaking of ranks at reveille to sundown.

During the month of July the Florida rainy season set in, followed by malarial fever, typhoid fever, and a local fever of a peculiar type with diarrhoea that assumed alarming proportions in a short time. The ground became soaked with water, palmetto flats were converted into swamps, most of the camps had to be abandoned, and, in the latter part of July the regiment was moved to what was supposed to be a better site. This camp also being flooded by August 5th, another change was made to Tampa Heights.

The return for May shows an enlisted strength of 730, with 27 men on sick report; for June, enlisted strength 1,049, sick 58; for July, enlisted strength 1,194, sick 176; for August, enlisted strength 1,169, sick 279; of which 169 were absent in hospitals at Fort McPherson, Ga., Tampa, Fla., and Fort Thomas, Ky. This number does not include 78 men who were absent on furlough under the provisions of General Orders No. 114, A. G. O., series 1898, which provided that "sick and wounded soldiers sent to the U. S. General or Field Hospital when able to travel, be granted by the surgeon in charge one months furlough and transportation to their homes," making the actual number of enlisted men sick in the regiment 357, a gain in its sick report of 330 during the period from June 7th to August 14th, while at Tampa, Florida.

On June 21st, Troops "L" and "M," were reorganized under provisions of General Orders No. 27, A. G. O., 1898, five men from each of the established organizations, selected with reference to their ability to assist in the instruction of recruits and the training of horses, being transferred to these troops. Sergeant Terrence Hamill, transferred from Troop "I," was appointed First Sergeant of Troop "L," and Sergeant Eugene Bohne, transferred from Troop "C," to Troop "M."

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On July 24th, Troop "A," under the command of Captain A. C. Macomb, left the regiment for Port Tampa, at which place it embarked on the transport "*Morgan*," sailing the same day under sealed orders for Porto Rico. The orders, opened at sea, directed the "*Morgan*" to proceed to Cape Fajardo and there await the arrival of General Miles who was to land a force at that point, but it transpired that the landing point of Miles' expedition had been changed after the sailing of the "*Morgan*" which lay off Cape Farjardo until a Naval Scout Ship arrived with the information and with orders for the transport to proceed to Ponce, where the troop landed on the 7th and was ordered to Yauco, to report to General Schwan, who was organizing an expedition for the advance on Mayaguez.

This command, consisting of the Eleventh Infantry, two batteries of field artillery and Troop "A," Fifth Cavalry—approximating a strength of 26 officers and 1,400 men exclusive of brigade headquarters, was to proceed via Savana Grande and San German, to Mayaguez and thence to Lares and Arecibo.

Marching from Yauco on the 9th, information was received at San German the following day that the entire Mayaguez garrison had marched out on the San German road to contest the advance of Schwan's troops. Following the road, as it winds through the narrow valley of the Rio Grande, to the junction of that river and the Rio Rosario south of Homigueros, Troop "A,"—acting as advance guard—was fired on by the enemy's scouts concealed behind a hedge along a wagon road leading to Homigueros, located about fifteen yards from the main road.

A short encounter ensued after which the dispersed enemy was followed with the object of preventing the fleeing Spaniards from gaining the town. The troop having become separated from the main command, in an endeavor to rejoin, moved to the rear when it was again fired upon from a ridge, by a force estimated at about three hundred. Dismounting and concealing its horses in a corn field, a portion of the troop returned the fire, while Lieutenant Valentine with a platoon wormed his way to the river embankment and, having formed as skirmishers, his line being reinforced by the advancing infantry, and the hill charged, the enemy firing volleys at the main body of the command and retreating.

From the top of the hill an exchange of fire was engaged in for a short time when the enemy's fire ceased and he retreated along the Mayaguez road followed by Troop "A," which kept up the pursuit to within a short distance of the city of Mayaguez, rejoining the main command at dark. Three prisoners were captured by the troop, but with the exception of these and the several dead scattered along the road within range of the hill, none of the enemy was encountered.

During the affair, which ended about 6:00 P. M., the brigade had one man killed and one officer and fifteen men wounded as were several horses of the staff.

The following morning the command marched on Mayaguez, Troop "A," followed by brigade headquarters, marching through the city at about 9:00 A. M. Colonel Soto, who commanded the Spaniards, upon hearing the result of the Homogueros fight had "pulled up stakes" and our troops found the town clear of the enemy, after whom Troop "A," was despatched to keep in touch. Returning in the evening with the information that the enemy was ten miles distant and still retreating, twenty men of the troop, under Lieutenant Valentine, was detached to accompany a reconnaissance in force consisting of six companies of infantry and two pieces of artillery, organized to harass and retard the progress of the retreating enemy.

Leaving Mayaguez on the morning of the 12th, this command marched along the road leading to Las Marias, bivouac-ing for the night at the junction of that road and the road from Mareaco. The latter part of the march, a climb all the way, was made in a drenching rain. The following morning the advance, preceded by Lieutenant Valentine's detachment, pushed forward, but after an hour's travel, the road became almost impassable, the artillery being obliged to haul their guns by hand over a section of the road causing a delay of about an hour. Lieutenant Valentine was ordered to push forward with his men to ascertain the movements of the enemy.

At Las Marias the lieutenant learned that the Spaniards, estimated at about a thousand, were endeavoring to cross the Baccacio River, which, owing to its flooded condition was being accomplished very slowly. Reporting this fact to the commander of the reconnaissance, he was directed to make contact with the enemy, it being desirous to capture that portion of the command which had not succeeded in crossing the river. Emerging from a cut, after having traversed a rough trail for two miles beyond Las Marias, he came out on a portion of the trail that afforded a view of the valley, across which a party of about one hundred and fifty Spaniards could be seen winding their way up a trail on an opposite hill about one thousand yards away. They were fired upon, the result being their taking to cover in the dense undergrowth that clothed the hill and returning the fire. During this exchange of fire, the main com-

mand came up and Captain Macomb with the entire troop proceeded along a bridle path to the ford where a number of pack animals were in sight. Having taken a Spanish lieutenant colonel prisoner and picked up several bull carts with supplies and records, they rejoined the command and camped for the night.

As only two wagons had reached the camp, but a scanty supper was provided for the tired men and for breakfast there was even less. That the Spanish forces were demoralized and for the most part disintegrated was obvious and to give the *coup de grace* seemed easy if they were given no peace and the pursuit was resumed at once. The men were weary and hungry but there was no doubt that the enemy was more so as they had lost all heart in their cause, while our men were enthusiastic. The command pushed forward to Lares, where Troop "A," already scouting in the vicinity was to join, but having crossed the river and taken two prisoners, Captain Macomb received a message from General Schwan, to the effect that a protocol had been signed, and the following day, he with his troop established the first station of the Fifth in Porto Rico, at Las Marias.

The regiment remained in camp at Tampa until August 15th, when it proceeded by rail to Huntsville, Alabama, where it arrived August 18th, numbering 25 officers and 845 enlisted men, going into camp at Camp Wheeler, near that place. The name of this camp was later changed to "Camp Albert G. Force."

Many cases of typhoid contracted at Tampa now developed and the wisdom of the change was not at first apparent, but the bracing breezes of the uplands eventually did their work, and by November 1st there was a great improvement in the health of the command.

On November 4th, Headquarters with Troops "B," "D," "E," "G," "K," and "L," departed, proceeding by rail enroute to Savannah, Ga., at which place they embarked on the transport "*Michigan*" and sailed for Porto Rico on the morning

of the 9th. Headquarters with Troops "D," "E," and "L," disembarking at Mayaguez and Troops "B," "G," and "K," at San Juan; the Headquarters with one troop being stationed at Mayaguez, while the remaining troops were scattered over the central and western parts of the island.

The remaining five troops, with which the writer was serving as a member of Troop "I," remained at Huntsville until January 21, 1899, when they proceeded to Savannah, Ga., near which place they went into camp until February 1st, when the command embarked on the Transport "*Michigan*" sailing the same day for Porto Rico.

On sighting the Island, all thoughts of the discomforts experienced during the five day's voyage disappeared. At best it had not been a pleasure trip, our horses, a shifting cargo, occupying the upper decks, demanded constant attention, while the wretchedness of the voyage had caused many to wish themselves snugly quartered in their old barracks in the states.

On nearing the harbor, the Castles of Morro and San Christobal with their background of housetops lying against the hill, demanded our attention, the view changing as we entered the harbor where square upon square of artistically designed structures were descried, located upon the side of a gently sloping hill receding from the waters' edge, behind which the old forts were all but lost to view.

We landed at San Juan, February 6, 1899, as a part of an army of occupation where many of our comrades, members of the first detachment were gathered to welcome us. But little time was allowed, however, for our introduction to that old town with its 32,000 inhabitants, of whom 18,000 were packed within its walls inclosing about 140 acres, the remaining 14,000 being scattered about the suburbs of Puerta de Tierra and Santurce.

When we had seen the last of our property loaded, and were still engaged in fastening the wagon covers, "*Boots and Saddles*" reminded us that another duty demanded attention, and the next breathing spell found us in the saddle. As we moved out in column of fours on the military road, we observed a sign "Artificial Ice" that had been posted on one of the build-

ings on the wharf, and speculated as to the composition of such an article, but the road on which we found ourselves demanded all our attention.

Troop "I" was fortunate in traversing this road from San Juan to Ponce. We were told that it was constructed by convicts under military direction and that its completion had required three hundred years at a cost of \$30,000,000. It was eighty-two miles long, macadamized the whole distance, and winding like a serpentine trail from San Juan on the Atlantic seaboard to the coast of the Caribbean Sea.

For the first seven miles we passed numerous villages and haciendas, the yards of which were filled with orange and coconut trees, together with banana plants and flowers, apparently of every known tropical variety.

We camped at Rio Piedras, seven miles distant from San Juan. Resuming the march across the Island, on the third day after landing, we climbed the mountain over the military road which was as free from dust as an asphalt pavement. The road wound in gentle grades along its mountainous course, around frowning chasms and over rushing streams, cut into the sides and through the face of the mountain range known as Cordillera Central, Sierra de Cayey and Sierra de Lugui, which were from 2,000 to 3,000 feet in altitude and which extend through the center of the Island, culminating in the east in the Peak of El Yunque, 3,609 feet high. There were foothills here and there on both sides toward the sea, forming fine valleys watered by over thirty main streams, of which a few are navigable for a short distance. The climate though tropical was not exceedingly warm, the average temperature being eighty degrees and the men were in their glory.

Everything we now encountered was new. The road, we found was kept in repair in about the same manner as our railroads in the states. At about every three or four kilometers we would pass the Caminero's house, who, as the railroad section boss, superintended the repair of such portion of the road as was under his supervision. The huts of the peons constructed of poles and palm leaves, were scattered everywhere and here and there the home of the planter was passed. The cocoanut trees in the lowlands were soon passed and in

the foothills we found oranges, limes, lemons and bananas, and as we would halt to view the landscape—while our horses obtained their regulation rest—the natives approached with oranges, procured from groves where we could see the clusters of yellow fruit growing in abundance.

Much of the cultivated land was very steep, but the constant moisture gives the rich soil a thick growth of vegetation and clinging roots that hold the earth and there is no frost to loosen up the ground.

The trees—of the semi-tropics—were shrouded with Spanish moss and flowers, and bushes white as snow with their bursting pods of cotton, standing as they were against a background of green foliage, presented a picture that was unequalled.

As we ascended the foliage changed, the royal palms marked the landscape in every direction, while a scattering of bread-fruit trees and coffee plants with their red berries and the ever present banana plants for shade, could be seen in every direction. On the summit were the pastures.

Troop "C," which had started with us from San Juan, left early in the march for its new station at Humacao, Troop "M," falling out at Cayey, leaving Troop "I," to climb the grade to Aibonito, accompanied by members of Troop "G," who had ridden out to meet us with the information that a steaming dinner was waiting. Many a heart rejoiced and the mountain scenery failed to interest us as we anticipated the first meal in a mess hall since we had moved out from Fort Clark, Texas.

Aibonita is situated in a pocket in the hills and about two and a half miles northwest of the town, on the main divide, are the Asomante and El Penon Hills. On the summit of these hills the Spanish had their batteries in 1898, while on the slope below their infantry was entrenched completely sweeping the road with a plunging fire. As we passed that point we were at an elevation of 2,700 feet and further on we passed the point where Captain Potts of the Third Artillery, had turned from the road under a heavy fire and silenced the Spanish guns in just fifty seconds. So impregnable were these works that some of our best engineers declared that if they had been manned by men of courage, all the armies of America could not have prevailed against them.

From this point the road stretched along the mountain side like a thin line of chalk, the winding course of which we followed in and out among the hills to Coamo. After this we passed through the cane districts of the lowlands, and after a rest at Juana Diaz, pushed on to Ponce, where the troop, under the command of Lieutenant Joseph A. Cusack, pitched tents in a palm shaded yard on one of the principal streets. Later on, we occupied a building in the town, and, on the departure of the Nineteenth Infantry for the states, moved into the barracks occupied by part of the Eleventh Infantry.

We were on the ground, the volunteers were being returned to the states, the war with Spain was a thing of the past and the question arose as to what our duties consisted as an army of occupation. So far as the men engaged are concerned the question needs no answer, but for the civilian and the large number of young men who have subsequently joined our regiment, an explanation of that service is necessary for a proper understanding of the work done by a military organization, especially as the "*list of battles and engagements*" is not an index to our military record.

In the following, an effort has been made to set forth the characteristics of the inhabitants; the system of laws and customs under which a wilderness had been developed into a densely populated community; the handling of the situation by Spain before American occupation; the conditions as found by us; the changes made by our government; the system adopted in effecting these changes and the service of the regiment in carrying out that system.

The aboriginal inhabitants of the Island, with its area of about 3,400 square miles, or a little less than one-half the size of New Jersey, we find belonged to the Carib race, but differing somewhat in *racial* characteristics from the Caribs inhabiting the Windward Islands. They styled themselves Borinquenos and called their island home Borinquen. It is variously estimated that the natives at the time of the discovery of the island numbered from 600,000 to 800,000 but whatever the number may have been, there is abundant evidence to the effect that twenty or twenty-five years later there were no natives left in the island available as mine workers. It was

the custom in those early days among the Spanish adventurers, to seek riches and distinction by any means within their power or control. No laws restrained them; no order of the King controlled them save that they were to search for gold and Christianize the heathen inhabitants.

Along with the allotment of the lands the Indian inhabitants were apportioned as serfs to the grantees.

The early inhabitants, if statements of voyagers are to be relied upon, were gentle and exceedingly hospitable in disposition; they possessed very rude and imperfect ideas of divinity, still their daily life had been a living example of nearly all the essential virtues of christianity. Their abodes were better and more adopted to comfort and cleanliness than those of the common people of the European nations at that time. They received the Spaniards with open-handed hospitality and their kindness was repaid by murder, rapine, degrading and insufferable slavery, the destruction of their homes and the desecration of every object that was sacred to them. Within a little more than one year after the second landing of Ponce de Leon, he had civilized these natives by murdering nearly the entire population and the few who survived his butchery were reduced to slavery worse than death itself. The allotment of Indians, practically slaves, was described by the word *encomienda*. That all of those so allotted were not worked to death is certain, for the women were made concubines and their children surviving as half breeds, created an admixture of Indian with Spanish blood which is recognizable in the Indian features of some of the present generation. The remaining traces of the aborigines however, are not numerous and it is evident that they have had but an inconsiderable influence in determining the type of the population in which we were interested.

If we should follow the fortunes of the early adventurers—men accustomed only to arms and warfare—we would discover an influx of seamen, sailors, and stowaways who had deserted from every vessel which touched the island. With no code of law conducive to good order, and unrestrained by the government, this class spread over the mountains and valleys; built themselves miserable hovels and lived upon the plantains,

native fruits and the cattle which roamed among the mountains. They were worthless and lazy, possessed no implements, had no knowledge of agriculture and with no one to assist or aid them in clearing the forests, advancement was beyond expectation. To encourage such laziness there was a balmy climate, which required little clothing, and with five days' work a whole family could secure enough plantains to last them a year and with bread made from the flour of the cassava, milk of the cows, a little corn and the wild fruits they were contented. For beds hammocks were made from the bark of a native tree, while clothing was procured by trading their cows, dyewoods, horses, mules, coffee, tobacco and other articles, the possession of which required but little effort.

They had advanced from this stage step by step. The whites found no repugnance in intermarrying with the mulattoes. The island had been a military post, its troops being stationary, or what we today in our foreign possession term "colonial troops." The officers, despairing of ever returning to Europe, married with the creole ladies, many of whom, proud of descending from the first conquerors, were considered noble. In this manner becoming at once soldiers and agriculturists, they looked on Porto Rico as their homes and many of the most opulent and respectable families had descended from them, forming what may be called the Porto Rican aristocracy.

In their poverty they had been inexorable in exacting from their inferiors the homage paid to superior rank, while the common or lower class, called *Jabaros*, would make the necessary effort only to procure that which afforded them frugal subsistence.

The slaves had been given their freedom in 1873, the number liberated being 29,229, the owners being compensated at the average rate of 200 pesos for each slave. At the time of American occupation, there was a race prejudice, the natural tendency of the mulatto being to deny the existence of negro blood, while it was a warrantable presumption that a very considerable number of those who rated themselves, or were rated as whites, were actually mulattoes and would be classed as "colored" in the United States.

The number of persons living together as husband and wife by mutual consent, consituted about one-fourth of the population.

At the beginning of the readjustment of affairs under the military government, it is a conservative estimate to place the laboring class as quite 600,000. These did not own a rod of land or possess property of any kind except their miserable cabins or thatched huts and a few insignificant articles of household goods. The remaining population is accounted for as the agricultural and urban proprietors, and their families, with the families of the farmers and those of the few professional men. The old landlords had not cultivated their estates, which would have employed this labor, and the simple needs of the *jibaro* and his family were few. A week's work yielded the field hand a dollar or two; one week's labor with the fruits and roots that were found in abundance sufficed for two or three weeks existence in idleness and contentment. It was found that seventy-nine per cent. of the plains and valleys, hills and mountains consisting of cane, coffee and tobacco fields, though swarming with inhabitants who belonged to the laboring class, were not cultivated at all. This essentially agrarian island was accustomed to expend of the proceeds of its external trade approximately \$5,000,000 a year in the purchase of foreign grown food stuffs, to the production of which the soil of the island was perfectly adapted.

Of manufacturers there were none worth mentioning save sugar, molasses, rum, and cigars and cigarettes made from local tobacco. There were hides and pelts in abundance, but no tanneries, shoe or harness shops. Cotton could readily be grown, but there were no factories for working the fiber. There were 5,000,000 pounds of common soap imported in 1897, every ounce of which could have been made at home and all the meat imported could have been raised on the island. The waters teemed with fish, yet there were brought to the island over 25,000,000 pounds of salted and dried fish the same year.

The idle laborers should have been employed in growing food crops for their subsistence. They would not work but instead existed apparently without any incentive, energy or ambition.

Of local industries, there were four so-called match factories where imported match sticks were dipped into imported chemicals and the finished matches packed into imported pasteboard boxes, marked with imported labels. There were some individual shoe and harness makers working up a small quantity of imported leather, while village blacksmiths and wheelwrights mended and occasionally constructed natives carts or assembled imported materials into carriages. Macaroni from imported flour was made in a small way; small quantities of native cassava were converted into starch and some preserves made from the guava fruit.

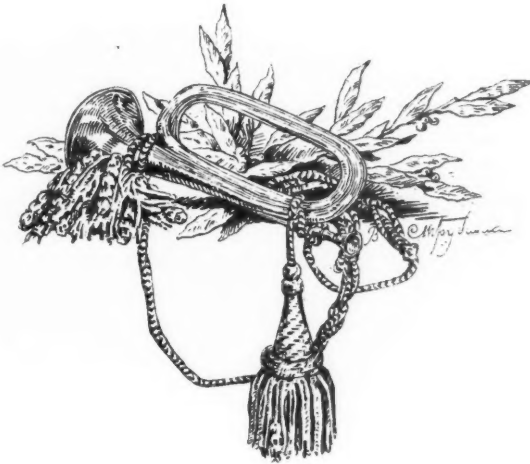
The natives were no more stupid or ignorant than the Filipinos, as our experience with them since that time has proved. The Filipinos make from the native fibers beautiful fabrics and mats that command a ready sale and high price. The Porto Rican was no lower in the intellectual scale than the natives of central Mexico who make choice pottery and handsome embroidery, saddlery and lace; than the Pueblo Indians of New Mexico, who produce fine basket work and silver ornaments; than the native islanders of the Pacific famed for their excellent mats, or than the Equadorian from the shores of the Gulf of Guayquil who make Panama hats from native grasses that are known and prized throughout the world. The Porto Rican could have made similar mats of available material and did make a hat almost as fine as the Panama from native fiber, but the hatters were few in number, lazy, without enterprise and the excellence of their goods was unknown. In fact, there was nothing choice, interesting, curious, attractive, or ornamental of local fabrication and as a whole it would be difficult to find anywhere in the world a community of a million people classed as civilized who were less self-reliant or more indolent and helpless.

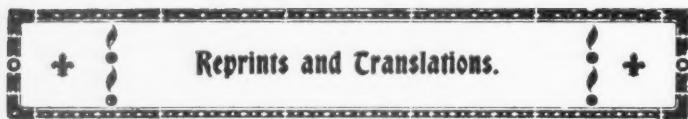
It is believed that nothing more need be said to give a comprehensive understanding as to the people among whom we were to serve during a very trying period.

It has been said that Spain repressed and discouraged all initiative, still it is a fact that Panama hats and pita hammocks were well known before Spain let go her hold on South America and we have since found that the Spaniards encouraged local

industries in the Philippines. The difficulty may well be placed at the door of the Porto Rican, of whom the well-to-do were as proud as Spanish hidalgos, considering labor demeaning, while the poor jibaro and freed slaves and their descendants had never worked systematically or regularly in their lives, regarding manual labor with abhorrence. Yet some of them had heard, and they believed, that if they only knew how to read and write they would be able to live without the necessity of working for wages.

[To be continued]





PRACTICAL ADVICE TO CAVALRY ORGANIZATIONS.*

(War of 1914. Resumé of new procedures imposed by the present war, from an experience of five months in campaign.)

BY CAPTAIN DE SÉZILLE, FRENCH ARMY.

IN ADVANCE of new regulations which the experience of the present war will certainly bring out, when the declaration of peace will re-open the doors of our great military schools, this modest essay sums up the personal information which we have drawn from the first five months of campaign, spent at the head of an active squadron.

We have had the good fortune to be employed successively upon the principal fields of battle and thus called upon to participate in operations of mounted cavalry (scouting, security, protection), in the course of the marches of the beginning, and then in the missions of coöperation with the infantry in the trenches. We have intended to be of use to the instructors of the depots or of the rest camps, as well as to chiefs of units or platoons having to employ their troops in circumstances or situations new to them, by exposing the principles whose formulae should, in the future, be familiar to all the bodies of cavalry.

We have divided this little work into two parts:

The first treats of the employment of cavalry mounted. The second studies its utilization in the trenches.

A short annex completes this study by some advice of a purely practical nature.

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FIRST PART—CAVALRY MOUNTED.

Present Necessities of the War:

The present necessities of the war requires procedures other than those to which the troops have been trained and which they abandon with difficulty.

The object pursued up to the present in our arm has consisted of being always as much grouped as possible in view of cavalry combat which was supposed to be imminent.

Today, the main idea is to preserve the troops to fulfill their diverse missions by keeping them constantly sheltered from ambushes, surprises by fire, etc., which constitute the present conduct of our enemy.

The characteristic of the field of battle is the absolute emptiness which it presents. The airmen declare that they cannot perceive anywhere masses of troops or strong columns. The cavalry ought not to be the only arm which continues to hold forth and to promenade in the zone of action as visible objects, as targets to aim at.

There is room then to particularly modify its conduct of marches, halts and combats.

*Marches and Halts.**(A) Formations.*

As soon as one arrives in the zone of action, even far behind the line of combat, measures of precaution should be taken to avoid surprises by the aeroplanes, then by the long range artillery, and finally by the closer fire (field artillery, machine guns and rifles.)

It is necessary, first and foremost, to repudiate heavy columns and large masses, vulnerable and visible.

Aeroplanes. To escape from the view of the airmen, it is necessary to disperse by platoons or by squads, utilizing the edges of shelter (the borders of woods, hedges, slopes, straw-stacks, clumps of trees, etc.,) by preference in the shadow, and to maintain an absolute immobility. This dispersion will be made rapidly, before the arrival of the aeroplanes, by means of a brief signal or conventional command emanating from the

chief, as soon as he hears the whirring of the aerial motor. He will not retard the dispersion by seeking to discover the nationality of the aeroplane. His signal should indicate the direction from which the machine is advancing, in order that the troops may reckon on the orientation of their shelter. Take for example this command: "Aeroplane to the right! Disperse!" In default of shelters or screens, they will take rapidly in the open ground, a very thin formation (200 meters distance between platoons, each itself dispersed by squads in column or in extended order having between them 100 meters interval), and become motionless. It is in every case recalled, that the officers alone are qualified to have fire opened on the aeroplanes, when they fly low, and their nationality is quite certain. The troops should not therefore, under any circumstances, be too curious about these machines; they should be severely trained to purely and simply hide themselves as soon as the conventional command reaches them.

Long Range Artillery. This artillery produces in general, more noise than execution, if our troops are well opened out. Experience has permitted us to establish that the range was habitually lengthened out after the first shell; it seems then advantageous to move, if one can, immediately in the direction of the battery which is firing, passing by the point of fall of the first shell.

Field Artillery. It is the same thing regarding the field artillery. If one is at a halt, dismounted, the explosions will often be avoided by lying down. In any case, if one finds that he is a target, he must resort to mobility, which will permit him to rapidly get away from view and shots.

Machine Guns and Rifles. It seems superfluous to enlarge upon the necessity of applying likewise the above-mentioned principles to protect oneself against the surprises by these arms. Their limited range will otherwise render their intervention difficult if the protecting patrols are employed as they should be.

(B) *Marches on Road.*

It is necessary to open out the columns by increasing the distances (one kilometer between the regiments of a brigade,

several hundred meters between the squadrons, variable distances between platoons.)

If the terrain and circumstances permit, increase as much as possible the number of routes of march.

(C) *Marches on Varied Ground.*

They should be utilized even behind the first lines when the going is good, and in every case, as soon as circumstances indicate.

It is necessary to open out and echelon the units. It should be understood that all extension of the front requires an echelonning in distance, without which the direction and the formations are with difficulty followed and seen by the units or subordinate sub-divisions.

The subordinate units and sub-units open out and echelon themselves in their turn, taking as soon as there is room, the necessary intervals and distances.

(D) *Halts.*

Halts of whatever duration should, in the same manner as prolonged assemblies, call for, if not already existing, immediate breaking up and opening out.

If halting long in a village, conceal the men and horses in courtyards and shelters. No man should in this case stand in the streets or in the doorways. The prohibition against trying to see aeroplanes is rigorously enforced. If hostile artillery is to be feared, a part of the troops will be sheltered in the cellars (vaulted ones preferred), where they will hold themselves ready to go out at the first call of the vedettes (left outside under the shelter of planks, mattresses, etc.) The security of the troops is more complete when they occupy an emplacement protected by two thick walls on the side from which the projectiles arrive.

In the open field, if the halt must be prolonged, get shelter in holes, quarries, etc., and conceal them with branches and earth. The following arrangement is excellent against the shells of heavy artillery, if one has the time and materials necessary to construct it over a hole. A layer of poles (A—B)

is covered with eighty centimeters of earth (C). Upon this earth, are laid in a direction perpendicular to the first poles, a second row of poles (E—D), which are also covered over with earth (C) to the depth of sixty centimeters.

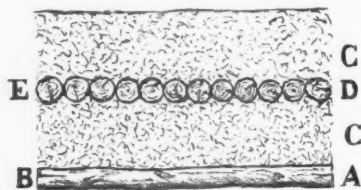


FIG. I.

(E) *Utilization of Terrain.*

During the *march on roads*, seek to diminish visibility by avoiding the center of the road; even in default of trees, the low sides add notably to this diminution. Utilize also hedges embankments, etc.

On varied ground, in the sector of march, each unit profits by all the accommodations offered by the ground, as much by its form as by its shelters, to escape the view and shots of the enemy.

In order that this utilization may be as complete as possible, it is necessary to leave to the sub-divisions the greatest latitude in formation and echeloning; the distances or intervals mentioned are only loose indications and not strict limits; all geometric ideas are to be banished.

(F) *Connection—Communication.*

The spreading out, the hiding of the elements, has for its greatest objection, the difficulty rendered to transmitting orders and to rapid assemblies. It is necessary to endeavor to reduce this difficulty as much as possible by good organization of connections, agents of communication, and connecting files.

In principle, the connection is *made to the Chief* (or on the element which he designates). It is up to the units or sub-

divisions to thus establish it without special orders, either toward the front or toward the rear, by detaching at proper times agents of communication or connecting files.

Some conventional signals, augmenting the regular ones, should be employed to permit of control at a distance and particularly of the rapid assembly or dispersion.

This arrangement makes it easier for the chiefs of the different echelons to move about freely at a distance from their organizations.

(G) *Security—Protection.*

Marches and assemblies should be *automatically covered at a long distance and in all directions*. The great range of modern arms and their power of destruction impose now a zone of security of about nine kilometers, in place of the four kilometers which were advocated in the instructions of our professors in the times of peace.

In the most dangerous direction, the *advance guard* should be generally reinforced, not for the object of combat, but to constitute a reservoir permitting the reconnoitering elements to be multiplied, *no cover being allowed to remain unexplored*.

The main body of the advance guard should, as all other main bodies, and for much stronger reasons, adopt measures for the march and for halts as dispersed as possible.

Patrols and groups of scouts should avoid giving, by showing themselves on the crests, any indication to the enemy regarding the form and direction of the troops which follow them. *Vedettes* will observe generally on foot: the two horses remain behind the crest, held by the second trooper, while the first advances toward this crest, screening himself or crawling. It will be always otherwise advantageous to replace these runnings about of troopers, when possible, by a single post of extended observation, in a tree, on a hay stack, a roof, etc. The second trooper of a group of two scouts should always carry his carbine advanced or across, in order to be able, in case of need to give the alarm.

The procedure of *reconnaissance* should also be corrected.

In the Dangerous Zone.

A *wood* is not reconnoitered, even when its edge has been reached by a line of foragers; it should be traversed, or at least searched a good distance from the edge, over all the extent from which fire might come.

A *village* is not reconnoitered when it has been turned and traversed. It should be searched street by street, and at times, house by house. (The enemy frequently hides in the cellars and shoots through the vent holes into the back of the detachment.) It is necessary, on that account, that the scouts, acting in groups of two, be taught to dismount to complete their mission. In the majority of cases, the dismounting should take place at quite a distance from the outskirts, which should be approached with precaution by groups ready to fight on foot. One should watch specially the trees or high buildings where are frequently perched vedettes or isolated marksmen, at times in civilian clothes. Before pushing forward into a doubtful village, one should try to get hold of an inhabitant, outside—farm hand, shepherd, traveler, etc.—and learn from him as to the possible presence of the enemy. If this informer declares that he knows nothing, he should be instructed, in a firm tone, to go immediately and find out exactly in the village and bring back the desired information. If he does not come back, one can conclude that the enemy occupies the village; if he returns saying that there is no enemy there, keep the man within pistol range while crossing the village, warning him of imminent punishment if his information is false. One can also, in order to reduce the goings and comings susceptible of awakening the attention of the enemy, agree with this man on special signals to reveal the occupation, as for example: hang out linen on the edge of the town, release pigeons, make a dog bark, etc.

All that requires time certainly, but except in case of absolute necessity, we no longer operate with the superficial and conventional rapidity of autumn maneuvers into "an open grave!"

Necessary prudence should back up bravery in order to permit the latter all its useful effects. These new measures

assure the best execution of the mission, while avoiding useless losses.

The *contact squadron* should of course, apply all the principles enunciated above. Not losing sight of its mission, which consists of getting information, it sends out without interruption into the interesting directions, the "eyes" of which it is the reservoir. Be on guard against the dangerous temptation to push with the main body up on to the line of observation of the patrols when one's duty is to remain as their support*

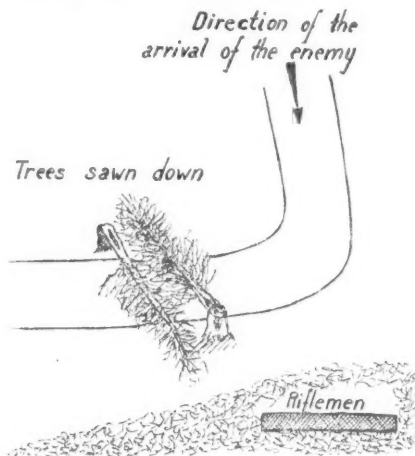


FIG. 2.

and rallying point. Most often the contact squadron warned of the proximity of contact†, organizes itself in support of its reconnaissances and patrols at a favorable point. It is then generally exposed to surprises by hostile cyclists or by armored automobiles. To prevent these, it is necessary to organize *temporary barricades* on all the neighboring roads and lanes, by

*In the forest of P——, where we were operating as contact squadron, parallel with a squadron of a neighboring regiment, we witnessed the surprise by German infantry of this squadron, which had advanced up on to the line of "eyes."

†We recall that the contact is determined by fixing the limits of the hostile line. Visual observations, information from inhabitants, will often be insufficient, and the fire of sentries will alone establish the location of that line.

falling across these approaches, nearby trees, hastily sawed. The latter should not be entirely detached from the stumps but should remain attached by the bark so as to make them difficult to displace. One should be careful to clear the road when leaving the vicinity, so as not to compromise the circulation of our own automobiles. The location of these barricades will be chosen, preferably near a turn in the road or a fold in the ground, so that the enemy will be close up before he sees them. The riflemen assigned to this duty will be placed on the flanks 200 to 400 meters from the road and in the direction of the enemy, thus holding him under fire during all the time he is stopped in front of the barricade.

These kinds of protecting ambushes facilitate the task of the squadron and give it an effective security. *Detachments of chasseurs cyclists* are at times placed at the disposition of contact squadrons. We have found it very advantageous to employ them as support, to hold behind us defiles or points of passage necessary for our retreat, and also to coöperate in the attack of a village with our platoons. We refrained from trailing them along with us across fields, to the detriment of our mobility. Whilst receiving their independent mission, they remain in connection with us, in order to be able on our call, to rapidly intervene at an opportune point. If the contact squadron *rests at night* in a farm or hamlet, with horses saddled and bridled, and men equipped they should encircle it with wire, fagots, ploughs, etc., keeping only one double exit and not letting any inhabitant go out of the enceinte, whatever may be his pretext. This measure, concerning the inhabitants, will be the rule in *villages where the squadron stops during the day*. In hostile country, several hostages will be gathered upon arrival who will be guarded during the entire halt; the telegraph or telephone offices will be destroyed or occupied, all ringing of bells forbidden, signals of all kinds watched for. Inhabitants coming from outside will be allowed to enter, but no one will be allowed to go out. The attitude of the officers and non-commissioned officers will be dignified, but very firm, especially with the officials, such as the burgomaster, school teacher, etc. It is the custom to take possession of the public funds and to set the clocks to the French time. For the *transmission*

of information, the dispatch post is indispensable; there will be attached to it always one or two cyslists. The dispatching of the above mentioned information will be made whenever possible by telephone, to gain time.

Combats.

It is well to continue to prepare the troops for *shock action*, which we will certainly have to use later. But it is necessary to be on guard against the ways of hostile cavalry, who always try, by a crafty retreating movement, to draw us into ambushes of infantry or machine guns. Without ceasing to preserve our natural keenness, we should avoid prolonging our pursuing gallop beyond three or four hundred meters, if we do not know where it will lead us.

As to *fighting on foot*, it has taken on a fundamental importance, and preparation for it should be actively pushed. It comprises:

Combat on foot such as we know, with opening of fire near the horses, sometimes even with the bridle on the arm, but also:

Combat on foot like that of infantry, the horses left at a long distance, with progression of firing lines up to contact, and up to shock action with side arms on foot. For that, it is necessary to organize the horses in a mobile column able to rejoin rapidly and take away from those fighting on foot all anxiety about their mounts. The men will be habituated to advance like infantrymen, with the carbine and the lance, if they have no bayonets. In this case, the trooper carries his carbine in his right hand and lets the heel of the lance drag, while he holds it in his left hand near the point. This exercise of advancing on foot may be prolonged for several kilometers. Marching to action, use the woods, shelters and defiles; in open ground, the march will be executed in small columns at wide intervals, with a non-commissioned officer behind each column. Beware of crests and cross roads, etc., which may be already ranged by the hostile artillery; cross them by increasing the gait and lengthening the distances. The attack, in open ground, will be made in several lines advancing at long distances and preceded by a platoon of advance guard, in line

of squads. The lines will successively take the same formations as the first, whether their mission is, according to circumstances, to outflank or to reinforce. When the *attack* takes place in *close country* or in the fog, it is necessary to beware of surprises, to increase the service of small protecting patrols, to assure the direction of march by means of the compass and by the visible lines of the ground, to watch out for connections. The distances may be diminished but the intervals should be maintained. *In the woods*, it is preferable to have recourse to the line of squads, by four, by two or by one, with a guide at the head and a non-commissioned officer at the tail, these small columns keeping well connected. In case of encounter, the first elements attack directly to the front, those which follow try to deploy.

In every employment of fire, it is always recommended to the chiefs of platoons to indicate low elevation and keep the firing low.

SECOND PART.

Cavalry in the Trenches.

Measures Preparatory to the Occupation of the Trenches.

The squadron arrives, mounted, at dusk, at a designated point, always situated three or four kilometers from the trenches. It dismounts, except one man of each three, to whom falls the care of leading two horses by hand, one on the right, the other on the left of his own horse.

The dismounted column is put on the march toward the trenches, it having been furnished before leaving the horses, with, an extra supply of cartridges, carbine with bayonet, or carbine and lance — this latter carried over the left shoulder, overcoat across the shoulders, cleaning kit, including mess kit, cold meal and reserve ration and a blanket. It is led to the entrance of the approach trench, where its emplacement is indicated to it by a connecting agent of the commander of the sub-sector.

In the course of the march, the cooks are left at some distance, at the locality—farm, hamlet, etc.—where each night the supplies are left by the provision wagon.

Each platoon, under the command of its officer, occupies a portion of trench. The captain sometimes, occupies with his agents of communication a post of command dug behind the trenches, with which it is habitually connected by communicating trenches. But more often this installation is missing, and all the officers take their places among their men.

The whole system is under the orders of a commandant of sector—General, Colonel or superior officer—seconded by the commanders of sub-sectors.

Warm meals are carried up in the evening under cover of darkness; they are composed of the ration for a period of twenty-four hours.

Duties in the Trenches—Precautions to Take.

Trenches of the First Line: In the daytime they will be permanently guarded by a post of observation occupying a special shelter. It is necessary to avoid showing oneself at the loopholes, and to crouch when passing them in the trench. Prevent idleness among the men, by occupying them in improving their underground quarters—superior shelters, green branches, making the soil healthy, etc.

The men will remain constantly equipped, having their arms within reach. If they have lances, place them on top and in front of the parapet; they are thus ready for eventual use and do not encumber the trench.

In case of attack, avoid wasting ammunition. Open fire at short ranges, with sights set at 200 meters, and observe the order of "hold or die."

At night, place at some distance from, and on a long face of the line, a listening post—a corporal and a trooper—lying down or sheltered behind a tree, a slope, etc., and in permanent connection by voice, with the trench where a sentry is watching. Abstain from visible light. Avoid sleeping heavily in the trench.

Trenches of the Second Line: The service is analagous but a little less severe by reason of the distance. One is more exposed to hostile shells.

Attack of Hostile Trenches.

Every attack of hostile trenches should be minutely worked out in advance. One should have reconnoitered the terrain, the trace of the hostile trenches, their flanking defense, machine guns, their accessory defenses—wire, *trous de loup*, etc.

The installation and intervention of our machine guns should be also foreseen and organized, as well as the communication with the artillery.

The attack is made by a strong line of skirmishers, accompanied by sappers carrying wire cutters, grenades, explosives, etc. This first line is, if possible, furnished with shields or sand bags, behind which it takes shelter, opening a steady fire on the hostile trench. During this time the sappers work at the destruction of the wires. As soon as the hostile trench is reached, it is rushed with the bayonet. If the attack succeeds, the attackers install themselves in the hostile trenches; the reserve spreads out to right and left and pushes ahead after the enemy.

The *night attack*, executed by troops knowing well the terrain and the position, is employed to recover a point of defense lost during the day, or else to gain ground toward the hostile trenches. In the first case, they advance in a line of small columns, preceded at short distances by patrols. If the enemy lights up the terrain by his search lights or his rockets, lie down during all the time the light remains. A reserve marches behind at a short distance, and coöperates in the occupation, consolidating it. In the second case, patrols are pushed, at the commencement of the night, up to contact. As soon as they are fired at they stop, shelter themselves by digging holes and report. The troop then moves up to the line of the patrols; it digs, in its turn, trenches between the holes of the patrols and installs wire in front.

All this is afterwards perfected.

The End of the Mission and Measures to Return to the Cantonment for Rest.

The mission of occupation of the trenches always lasts from four to eight days. The return is affected with the same measures of detail as was the going in. The led horses are brought up at a stated hour, near night, to the place where they were previously quitted.

SUPPLEMENT.

Advice of a Purely Practical Nature.

Subsistence.

The reserve rations keep very poorly in their packages, where they are exposed to damp air, to the lye of the stables, barns, etc. It is necessary to examine them carefully and to put them, if possible into a metal box.

Light.

The lack of light is frequent; several electric lamps with a reserve of batteries and bulbs should be provided.

Carry besides, a folding, triangular lantern for candles, practical and small.

Finally, these means of lighting may be very well completed by a bicycle lantern for acetylene. Find a place for it on the machine of one of the cyclists of the squadron, who can thus light the road in front of the column during marches on dark nights; in cantonment it will take the place of an indoor light. Its provision with fuel is easy, with a small supply of carbide, which will find a place in the chest of the baggage wagon.

Smokers should furnish themselves with a patent tinder box with wick, very useful when the wind blows.

Clothing.

The new light blue cloth has not been finally adopted for the cavalry.

The officers have an interest in being from a distance undistinguishable from their men. They should sacrifice the nicety of fit, very natural when in garrison, and wear loose clothes. These do not impede the circulation when sleeping in one's clothes, and they permit the wearing of warm vests and underclothes.

The rank insignia should be reduced to the minimum allowed by regulations. Decorations, very conspicuous, should be marked only by a ribbon.

The best *gaiter* is the issue model with instep cover. One may prefer the puttie, but in this case, one must attach to the spur straps an instep cover of leather to protect the eyelets of the shoes from the rain.

The *ordinary laced shoe*, oiled and flexible, lightly hob-nailed is the best for march on foot, now customary.

Whatever it may be, the shoe should be chosen a little large. During cold weather, one will make use of two thicknesses of socks, the one worn next the skin being somewhat finer in texture, covered over by a paper sock. But as the paper preserves the foot at its initial temperature, the latter should be very warm when placed in the arrangement. If it is put in cold it will keep this temperature and not get warmed up. For cantonment we recommend a pair of barrack shoes in felt, water-proofed rather strong in the sole; wear them in rubbers on rainy and muddy days. Very much recommended is a false stocking of wool, knitted, without feet, black from ankle to knee, and red, or shade of breeches from the knee to its upper extremity. It advantageously replaces the leggings or leg bands; it can also be worn under the gaiter when very cold. The upper part may be turned under in a cuff (like the stocking of a cyclist), or drawn over the knee and thigh, which it keeps very warm.

The gloves should be preferably impervious to rain, but especially large and soft. For the cold, one wears over a thin glove of fine wool, a very large glove of fur.

The warm underclothes include a sweater without collar, to which one can on the march add a double plastron of fine knitted wool. As a complement to this paraphernalia, one

should be provided with a double plastron of paper, suitable in case of very great cold, to cover over all.

Neuralgia of the head is avoided with a knitted head covering. It should be of very fine wool, in large meshes, in order not to impede the circulation of the scalp and neck.

The cavalry overcoat, with removable, hooded cape—this last provided with an interior lining in the upper half, of waterproof material—should be reinforced with pieces of waterproof material over the knees.

Equipment—Horse Furniture, etc.

Many officers make use of a double sling of leather worn over each shoulder and supporting a belt, to which are attached

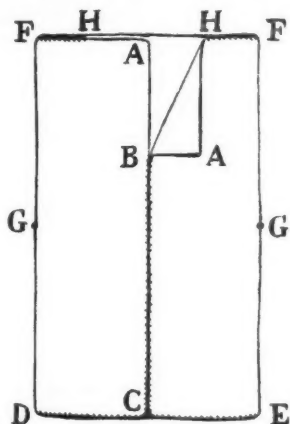


FIG. 3.

revolver, field glass, etc. This system, permitting rapid putting on, avoids besides, the compression of the chest produced by wearing cross-belts.

The horse-blanket of the regular outfit may be transformed permanently into a practical sleeping bag, without prejudice to its normal use under the saddle. It will thus render the most appreciable services in bivouac, or upon the straw of the cantonment. For this change, the blanket being extended flat, turn overtoward the middle the two borders of the short sides. Sew from B to C and from D to E, as well as

from H to F. The corners A remain movable between B and H, which facilitates getting into the sack.

One may be assured besides, against all injury to the back of the horse, if the sack is provided with a buckskin on the outside part of the bottom, between G and F. This skin will preserve besides, the cloth from becoming impregnated with the horse sweat; it will constitute also a little mattress under the back of the sleeper in the sack.

BREAKING AND TRAINING COLTS.*

Suggested Precautions in Early Horse Training.

THE erroneous idea that cruelty in horsebreaking and training is necessary is practically a thing of the past. Well directed patience has been found to give better results than inconsiderate application of the *persuader*. However, all horses are not to be treated alike; a high-strung, sensitive horse must be handled gently, the dullard treated sharply. "The first thing in training a horse is to get his attention; second, make him understand what is wanted. The education of the horse continues the bulletin, is based on reward and punishment and each should immediately follow the act. The advantage of breaking a horse when he is young before he has developed a strong independent instinct is easily seen. The plan generally followed is to break the colt to being led and handled before it is weaned, and to break to harness between the ages of two and three years. Colts should not do heavy work until they are four years old and should be accustomed to it gradually.

The following description of a rope harness to be used in teaching the colt to stand is also used in the first lesson on leading. A colt tied with this harness cannot easily injure himself in his efforts to get loose. A pull on the rope, as adjusted,

*Extracts from Farmer's Bulletin No. 667, Department of Agriculture.

exerts a pressure almost simultaneously on the crupper, surcingle and on the halter.

Before a colt is broken to being led it should be taught to stand tied; this applies to unbroken horses of all ages. To do this, put a strong halter on the colt; then take a rope about fourteen feet long, double it, putting the loop under the horse's tail as a crupper, twist the two ends together about three times so the twisted rope lies on the colt's back a few inches ahead of the tail, then let one come forward on each side of the horse, and tie them together in front against the chest just tight enough so that it will not drop down; then run a surcingle loosely around the horse behind the withers, tying into it the crupper rope at both sides. Have an additional rope about twelve feet long, run it through the halter ring, and tie it at the breast to the rope that forms the crupper. Tie the other end of the rope to a solid post, allowing about three feet of slack. Leave the colt tied for an hour. Another method is to have a loop in one end of the rope, run the lead strap through this loop, and tie it with a little slack to the rope that forms the crupper, the other end, of course, being tied to a solid post.

While tied the colt should be gentled and accustomed to being handled on both sides, on the hind parts, and on the legs. To do this, hold the headstall in one hand and with the other hand pet and rub the colt, first on the neck and head, then on the back and sides, and last on the legs. To gentle the hind parts take a stick about four feet long, wrap a gunny sack around one end, and tie it. Allow the colt to examine the stick with his nose, then rub it all over his body.

With this arrangement the colt's hind legs may be rubbed without placing one's self in danger of his heels. If he kicks at it do not hit him, but allow him to examine it again, and proceed as before. This lesson should continue until the colt will stand being approached from either side and rubbed all over. The second day he may be tied up again and further gentled with sacks, blankets, and noises until he has no fear of them around him, under him, or upon him.

Another method of gentling a horse is to tie the halter rope to the tail. This forces him to go in a circle. When he gives in and stands quietly he may be harnessed, saddled, mounted,

accustomed to strange sights and sounds, and handled with safety. This is one of the best aids in use in gaining a horse's submission.

BREAKING TO LEAD.

The horse is now ready to lead. Loosen the rope from the post, step off from the horse, and tell him to "come," following the command with a pull on the rope. As soon as the horse advances pet him, then step away and repeat. He will soon follow without the pull on the rope.

The next day the crupper should be put on at the beginning of the lesson, but should be discarded after a short work-out and the halter alone used so that the colt will not depend on the crupper rope. These lessons should be continued until the colt leads satisfactorily.

To break to lead without crupper ropes use a strong halter with a lead rope. Step back about six feet from the colt, opposite his shoulders, cluck to him, and pull on the rope. The colt will be forced to take a couple of steps; reward him; cross in front to a similar position on the other side and repeat the command with a pull. Continue the lesson until the colt follows. Never pull straight ahead on the colt; he can out-pull you. Use diplomacy rather than force.

BREAKING THE COLT TO DRIVE.

After the colt has been broken to lead he may be accustomed to the harness and trained to rein. The horse should never be hitched to a wagon or ridden before he is broken to drive in the harness. He should be trained to answer the ordinary commands. In familiarizing the colt with bit and harness the *bitting harness*, which consists of an open bridle with a snaffle bit, check and side reins, and surcingle with crupper, may be used. This rigging is put on the colt leaving the side and check reins comparatively loose, and he is turned loose in a small paddock for an hour. The second lesson consists of teaching the colt the feeling of the reins which may be tightened somewhat. The third day the driving reins may be used and the colt is taught to go ahead. Cluck to the colt, or tell him to *get up*, use the whip and let him know what is meant.

Both sides of the colt should be trained, as objects viewed from different angles may frighten him badly. Driving in a right and left circle will facilitate this training. The next lesson consists in teaching the horse to answer the commands of "*Whoa*," "*Get up*" and "*Back*."

After teaching the horse to go satisfactorily in the biting rig, the work harness with breeching can be substituted. The traces and breeching should be joined loosely together and gradually tightened, as the work progresses, thus familiarizing the colt with the sensation of wearing the collar and breeching. He is then ready to be hitched to the wagon or cart single or double.*

BREAKING COLTS THAT BALK AND KICK.

In breaking the colt to draw a vehicle the horse may develop bad habits unless he is properly handled. The most common cause of balkiness among horses is punishment to make them do something that they can not do or that they do not understand how to do. If the horse balks because the load is too heavy, and he is not allowed occasionally to rest and regain his breath, the use of whip or spur will very often provoke further and more stubborn rebellion. He should be given a short rest, and while he is resting, rub his nose, pick up a front foot and tap the hoof a few times, or adjust the harness and he may forget his balkiness. Take up the lines and give the command to go ahead, turning slightly to the right or left to start. If the horse does not start it is either a case of over load or a chronic balker. If the former, the load should be lightened, but in the case of the latter, training will be necessary to overcome the habit.

Where the balking habit is fixed, the horse should be trained to obey all commands with promptness without being hitched to the wagon. First put on the double trip ropes which consist of a strong surcingle, four two-inch iron rings, two straps to go around pasterns, and a rope about twenty-five

*Breaking the colt to drive double, also to ride, dealing with bad habits, throwing a horse, etc., are other features of this bulletin, No. 667, which may be had upon application to the Department of Agriculture.

feet long. Fasten two two-inch rings to the underside of the surcingle and put straps with rings on front feet. Run end of rope through near ring on surcingle, through ring on near foot, up and through off side surcingle ring, down, and tie to off fore foot. A pull on the rope when the horse steps will bring him to his knees. Always use knee pads or have the horse on soft ground, where he will not injure his knees.

Use the ropes until the horse stops and stands when he hears "*whoa*." Next put on the guy line, which should be managed by an assistant, while you drive and attend the trip ropes. The guy line is a rope fastened around the horse's neck and a half hitch over the lower jaw. It is very severe and should not be used to excess. If the horse shows any tendency to balk, give the command "*whoa*" before he stops of his own accord. When ready to start, the assistant should take a position in front of the horse and smartly jerk him forward with the guy line at the same time you give the command "*get up*." Repeat the process of stopping and starting until the horse shows no signs of self-will. Use the guy line and use it severely, on the slightest intimation that the horse is going to balk. After a few of these lessons the horse may be hitched to the wagon. The trip ropes and guy line should be kept on until he is well broken of the habit.

In treating the colt to overcome kicking put on the harness and trip ropes. Let the assistant take a stick about four feet long, wrap a gunny sack around one end and tie it. With this the assistant, if he stands at the colts shoulders and holds the halter with one hand, can rub the colt's hind legs without being placed in danger of his heels. If the colt kicks, do not hit him but allow him to examine the stick again, and proceed to stick and pole him all over; that is, make him become accustomed to being touched on any part of his anatomy without kicking. After he becomes submissive to the stick, tie sacks of hay to the traces and breeching and continue the lesson until he pays no attention to it.

Fasten a long pole on either side of him, with one end to drag on the ground, the other end to be fastened to the shaft carrier. Drive the colt around with these, and if he attempts to kick steady him and pull him to his knees. This should be continued

until he submits to the poles dragging between his legs and all around him. This is also a good lesson to be given a colt that does not kick, before trying to drive him single.

CARE OF THE COLT'S FEET.

The care of a horse's feet should commence when he is a colt, that is, before he is weaned. Untrimmed hoofs usually grow long and uneven, and a crooked foot, or worse, a crooked leg is the result. Failure to regulate the length and bearing of the foot may make a straight leg crooked or a crooked leg worse, while intelligent care during the growing period can gradually improve a leg that is crooked at birth. When picking up a colt's foot teach him to stand on three legs and not depend on the one holding up his foot for the fourth point of support. The handling of a colt's feet begins with the near front foot. Tie a rope around the pastern, grasp the rope close to the foot, push gently against the shoulder, and quickly lift the foot. The lifting of the foot must be simultaneous with the weight shifting to the other feet. Gentle the foot and leg and let it down. Repeat several times and then trim and level the hoof.

To raise a hind foot, put on a rope as on the front foot and draw the foot forward. To put a rope on the hind foot of a wild horse, tie up a front foot, have the assistant hold his hand over the eye on the same side as the foot to be lifted, or take the headstall in one hand, the tail in the other, and whirl the horse until he becomes dizzy. While in this condition he may be handled with safety. Lift the foot forward two or three times and gentle it. As soon as the horse gives in, carry the foot backward into a shoeing position and trim the hoof.

To handle the feet of a horse that will not stand still, or that kicks, a halter twitch is a great aid. This twitch is easily applied and needs only the ordinary halter and tie rope. Pass the rope over the horse's head just behind the ears; raise the upper lip and put the rope across the gums above the teeth; run the rope through the loop made by passing the rope over the horse's head. The rope should be tight from the halter ring, over the head, under the lop, and through the loop. A few good pulls on this rope should make the horse stand quietly.

OUR BAPTISM OF FIRE.*

BY MAJOR A. SEEGER, COMMANDING THE HORSE ARTILLERY BATTALION,
FIFTEENTH FIELD ARTILLERY, GERMAN ARMY.

TRANSLATOR'S NOTE: The register shows that the horse artillery battalion, Fifteenth Field Artillery, was stationed at Saarbùrg with Headquarters and one battalion (light). The other battalion (light) was stationed at Marchingen. The Fifteenth Field Artillery was brigaded with the Eighth Field Artillery, stationed at Saarbrücken, forming the 42nd Field Artillery Brigade. This brigade belonged to 42nd Division (Organized in 1912) which with the 21st Division formed the XXI Army Corps.

The Cavalry Division mentioned in this report was probably composed of the 30th Cavalry Brigade (11th and 15th Uhlans) stationed at Saarbùrg, and the 16th Cavalry Brigade (17th Dragoons and 7th Uhlans) stationed at Saarbrücken. The mention of the 26th Brigade in the report is evidently a typographical error; it should be the 16th Brigade no doubt. Since the Fifteenth Field Artillery is the only one of the four artillery regiments in the XXI Army Corps which has a horse artillery battalion, it is quite likely that this was the only artillery with the Cavalry Division, the other battalions (light) being held with the Army Corps.

A FEW days after the orders for mobilization, the Cavalry Division to which we belonged was assembled at Saarbùrg and awaited with impatience the order to advance in order to get in contact with the enemy. Pending the arrival and the detrainment of all the troops, the battalion had been designated as the main reserve for the troops protecting the frontier between the Vosges Mts., and the neighboring corps at Metz, being required to be ready at all times to take the march in case the French should, as was generally expected, make a sudden advance with strong forces against our comparatively weak force protecting our frontier.

But the attack was not made, and the mobilization was able to be carried out to its successful completion as planned.

*Translated from the "*Artilleristisch Monatshefte*" by First Lieutenant E. L. Gruber, Fifth Field Artillery, for the War College Division, General Staff.

As early as the second day of the mobilization, the first troop trains, enthusiastically greeted by us, began to arrive from the Empire. They were Bavarians from Augsburg and Lindau, who were received with an interminable cheering by their people* who were rather fearful of their own safety. It was evident to all that at this point so close to the frontier, some real fighting would soon take place. The events of August 17-20, have substantiated their apprehensions only too forcibly and the houses and barracks shot up during the bloody battle of August 20th, are today eloquent evidence of this. Without any more delay enroute, the Bavarians at once marched to their positions near the frontier in order to release for other duty the troops regularly garrisoned at Saarburg, which were to be assembled in their divisional organization. Under the protection of the Bavarian lines, every one, both civilian and military, looked toward the future with confidence and calmness.

When the capture of Liege and the early glorious victories of our troops became known here, our longing also to be permitted to speak with our guns grew apace.

Mobilization was accomplished according to schedule. Every man and horse, ammunition, the readiness of the command to march, all were reported in order even before the appointed time.

On August 8th, at noon, the "alarm" was suddenly sounded and orders were given to move out. In a half-hour the battalion was ready to move and proceeded to the rendezvous fixed at Haming. On the previous days our Ulan patrols had already reported that a strong hostile force of cavalry supported by artillery and cyclists was in movement in the country south of Linneville. This was no doubt the Cavalry Division stationed at that place, supported by troops from Toul. Some prisoners were being brought to the rear. They were cavalry patrols which were simply nabbed and hustled away by our Ulans as in 1870, and then made captive. These men were cavalry from the South of France, from Lyon, who in their full peace equipment had been hurriedly forwarded by

*The inhabitants of Saarburg are Bavarians, being in the Bavarian Palatinate.—*Translator's Note.*

rail. At noon, in the heat of a torrid sun, the advance to the frontier was begun on the road St. George—Foulcrey the troops cheering as the boundary was crossed. A halt was made at Hill 351 near the frontier. The battalion was assembled in formation and then went into a position. The advance cavalry squadron had already advanced beyond Blamont—Domevere—Verdenal and made its reconnaissance without having found the enemy.

To our left the Bavarians were engaged around Blamont, which was occupied by them that same evening. The inhabitants displayed great hostility even on this first day, and shortly after, their behavior led to a terrible summary punishment, which included also the neighboring villages, where, in a treacherous manner, they had fired upon our troops. Bivouac was made a little further back, our first bivouac in the enemy's country and under a clear star-lit sky. The next morning camp was broken and the advance into uncertainty was resumed. A position in readiness was again taken, pending the receipt of information concerning the enemy. We reconnoitered and searched the terrain with our splendid scissors observing telescope. In the far distance, fully over six km. away heavy clouds of dust gradually became visible near Gondrexen—Reillon—Chazelles, beyond the extensive Bois de Grand Seille. The range was too great to warrant opening fire at the target which by its movement was gradually identified as cavalry. In keeping with the principle not to open fire at such a great range, I refused permission to my battery commanders to disclose our presence so early in the fight.

Finally at 3:00 P. M., the order came to move up closer and to advance under the support of a force composed of Bavarian cyclists and Jägers, via Autrepierre to Gondrexen. In the latter place strong hostile cavalry detachments and a lively commotion were again disclosed. I caused the battalion to go into position very near to and above Autrepierre, in order to support the Jägers with our fire from this commanding position. The battalion went into position as if engaged in peace maneuvers; suitable observing stations were reconnoitered and selected; telephone communications were established and sectors assigned. Nothing could be seen of the

hostile artillery, and later this was the general rule. Suddenly there appeared at a distance still over 5000 m. an escadron trotting along near Reillon enveloped in a thick cloud of dust. I ordered one battery to open up suddenly with a surprise fire, and the first shots, breaking our terrible suspense, reverberated over the sunny fields. The effect of these first shots though a little short, was startling. The enemy was plainly seen to hesitate being very much surprised by these first shots from German guns. He then suddenly turned about in order to get back behind the crest by constantly increasing the gallop, being followed by our fire of increasing rapidity which was undoubtedly producing losses as was plainly to be seen, so that he soon disappeared in an extended gallop. No other target worth while was to be seen. Through the neighboring village of Autrepierre which was already in the possession of our Jägers, the march was continued to Gondrexon, with the cavalry in front. Our patrols had reported the hostile cavalry as marching away toward the South, so the advance was continued without interruptions to Chazelles where a halt was made pending further information. This second advance made at a rapid gait in the excessive heat of the afternoon had put a considerable strain on our horses and they perspired quite freely. At Chazelles our patrols came rushing back in a headlong gallop calling out: "Strong force of hostile cavalry with cyclists and artillery along the road on the low ground between Fremenil and Ogeviller." I at once rode over to the Division Commander and requested permission to take up a position southwest of Chazelles on Ridge 297 about 1500 m. to our front in order to take under fire as quickly as possible the target, which according to the map, could be done very advantageously.

Before leaving, I saw for the first time, plainly visible to our right front, the outline of the Forts at Manonviller, about eight km. distant. My attention was thus called to the fact that it was not impossible that we might come under the fire of the heavy guns located there, a circumstance which became of increasing importance, on account of the French network of telephone communications which was surely in existence and remained undamaged as further events also proved. After a rapid estimate of the situation and a short discussion with the

general staff officer, who believed that the range to the French Artillery was not over 6000 m. with which estimate I however disagreed, the advance to the ridge was made at a gallop, the batteries having been ordered to do their utmost to get into position quickly. In front of us our cavalry was deployed, being previously dismounted to fight on foot, and were firing upon hostile cavalry at St. Martin, who replied with desultory fire at about 1500 m. range. Very soon after, our skirmishers withdrew, in order to make room for our batteries which were advancing at a gallop in double section column. Upon reaching the top of the hill, I saw before me a panorama most alluring for a field artilleryman, a picture such as is seldom seen either in maneuvers or during firing practice. At about 3800 m. a great highway (Fremenil—Ogeviller) and on it cyclists in columns of twos moving along leisurely; beyond the road some artillery halted in a meadow by the road side; farther up the slope near the village, a strong force of cavalry in assembling formation. The neighboring village of St. Martin was occupied by hostile skirmishers, who now were delivering a livelier fire as my battalion headquarters showed itself and our cavalry skirmishers began to withdraw. In sizing up the situation I had immediately decided to move rapidly into an open position in order not to lose a single second. Riding along at a gallop, I roughly designated the positions of the batteries, two batteries to the right and one battery to the left of a sheep-pen, batteries to go in in the order of march, move by the flank and execute action to the flank. As the Battery Commanders, not very far distant from their batteries, came up to me, the hostile (small arms) fire became stronger but caused no losses. After galloping for 1000 m. and straining all efforts to the utmost the batteries came through a high field of corn up to Hill 297. Having first oriented every one, I quickly gave only the following orders: "Haste is urgent. Here's a chance to get a few Iron Crosses. Fire upon everything that is standing or moving down there. Right battery—Cyclists; Center battery—Artillery; Left battery—Cavalry." The excitement and the tension of all the men had reached its highest limit, and every one realized that in this particular case the effect produced came before any consideration of cover. The

battalion went into position as if it were on the drill ground where we had so frequently practiced this same maneuver. Shortly after unlimbering the first shots were fired, which although a little short, acted like fire heaped on a pile of ants. The cyclists energetically increased their pace, one could see how vehemently they were putting all possible power into the pedals, in order to get forward. The next shots followed quickly and already produced visible effect, empty bicycles, dead and wounded, a part dismounted and in proper manner sought cover in the ditch along the road; the other part was less wise and sought safety in flight, but by increasing their pace merely hastened to their destruction.

In the mean time the center battery had unlimbered and fired on the artillery which was halted alongside the road. They at once mounted up in order to get away. But the shrapnel reached them easily, because the trees lining the road gave little protection while the ground beyond the road was very open and in plain view. The enemy's guns separated moving away to both sides at a gallop. In a very short time two guns were put out by our fire and left standing unable to move. The others under the protection of the trees, attempted to escape on the road to Ogeville whereby it was very plain to see the drivers cutting and slashing their horses with their whips and endeavoring to urge their horses to exert their greatest efforts. The cavalry, at a halt near a small stretch of woods, disappeared quickest of all. No sooner had the first shots fallen in their midst than all hurriedly mounted and rushed madly away, and as was plainly seen, without either order or command, every one being obsessed with the mad desire to get to safety in any old way.

The rapid fire of my batteries, had up to this time, called forth no reply from the French artillery. We were all intent on inflicting as much damage as possible upon our careless opponent down below, and all our attention was concentrated on this objective. It was like a scene taken from our firing practice. The few small arms bullets which occasionally struck the ground were scarcely noticed. In this infernal noise of the gun fire, I directed the fire of the batteries as near as was possible under the circumstances. I passed along the

different batteries making corrections in such cases where I thought the shots were not properly placed or adjusted. Then suddenly, the first hostile artillery shot from some concealed position came whizzing toward us, followed immediately by a second, third and fourth, all four being fired with the same range and height of burst, and about 150 m. in front of my battalion. The burst of the shrapnel were rather high and therefore ineffective. "So that's it, at last!" said I to myself "Things are really first beginning," and I became curious over the probable outcome of the duel. For many years we had witnessed the firing of many rounds at our firing practice and at the School of Fire, had also observed the effect as seen from the firing point and from the range party near the targets and had obtained a distinct impression of the moral and actual effect produced by our German projectiles and the extent of the zone swept by their fire. But what I saw here did not come up to my expectations and this first impression remained unchanged during the whole course of the fight. My curiosity increased appreciably as I, after having taken cover with my staff behind our observation wagon, followed the fire for adjustment of our opponents. Being in an almost open position on the crest we presented an admirable target, something which we never again did in the future. The second French salvo burst in the prescribed manner about 100 m. in rear of the battalion, the fragments and bullets whizzing down the reverse slope behind us and almost reaching the position of the limbers in the hollow, but at present without doing any damage. I had a very distinct impression, that the pattern of the French shrapnel, as was previously known to me, had a smaller density of hits than our German shrapnel, and that many bullets spent themselves in the air, not reaching the ground until too far distant from the point of burst. This impression also remained unchanged during the whole campaign. It seemed to me that the "shower of bullets" common to our German shrapnel was lacking. After about two minutes of ineffective firing with shrapnel, a change was made and the first shell came rushing along, and we saw instead of the shrapnel white smoke balls, the black smoke produced by impact shell bursts accompanied by a violent and deafening detonation. Our opponent was

constantly coming closer with his projectiles and the moment was not far distant when the shots would be striking right in the midst of the batteries. Again we felt a curiosity of what would come next. There seemed to be very little nervousness among the cannoneers. At last the expected rafale came right in the center of the battalion, in fact right in the center of the battery. I looked in that direction and saw the projectiles bursting in front and in rear of the battery, and heard the clink of the fragments as they struck the shields. One shell struck about 5 m. from a trail, detonated and completely covered with earth a cannoneer who was engaged in bringing forward some ammunition baskets. He stopped for a moment, shook off the clumps of dirt, and then continued to carry his ammunition to the gun just as if nothing had happened. It was very noticeable how the men at the caissons got in closer and sought more cover of the shield, and that they then at once began to dig, in order to fill up the intervals with earth.

A part of the enemy's force below had disappeared, or was behind the cover offered by the road, seeking protection from our overwhelming fire. Of the cyclists we could see only the tail end as they entered the village, the entrance to which I had immediately taken under fire with shell in order to compel them to halt and thus cut them off. Later on it was seen that the greatest effect was produced here, not only against the cyclists but also against the fleeing cavalrymen who tried to escape. Our advanced cavalry patrols, who had gotten a point of vantage very close to the village confirmed our observations of the effect and the panic which our fire had produced. These became still greater when the buildings at the entrance of the village began to burn as the result of our shell fire. In the meantime the hail of hostile shell around my battalion became also more dense, but the relatively small effect produced raised the assurance and self-confidence of our cannoneers; they were leading, laying and firing more calmly. After our batteries had now been firing for about fifteen minutes, it was still impossible for us to locate the hostile batteries (there must have been several). We searched the whole terrain with our scissoring observing telescope, examining all the crests, woods and edges of villages. I thought that I could see something moving in a

church steeple and some indications of smoke behind a certain roof which showed up brightly. The fire of the nearest battery was at once directed upon this target. The instrument sergeant—a young aspirant for ensign—had quickly measured the offset in deflection and the angle of site, going about his duties just as calmly as if he were on the drill ground. Almost immediately the first shots were falling in the village, where the barns which were full with the harvested crops were soon bursting into flames due to the intense heat of the summer. After this the hostile fire seemed to diminish somewhat.

It was now necessary to again pick up any target which might still be visible and to make a re-assignment of these targets. At this moment a new and very strange sound was heard like the buzzing sound made by a heavy gun projectile. This was immediately followed by a second, third and fourth and they all struck in the immediate vicinity of our right or exposed flank. Shortly after this there came a terrific detonation with the burst directly in front of our guns. Enormous clouds of dust were produced and fragments were projected in all directions. A glance to our right and the riddle was solved. There was no doubt about it, we had gotten within the range of the guns of the Forts of Manonviller, which were subjecting us to an enfilading fire. There we were, a beautiful target for the enemy, caught in the nicest cross fire. In a low voice, I communicated my fears and estimate of the situation to the Battalion Commander, of the battery nearest to me, a proceeding which under critical circumstances is always advisable. I then counseled with him. Under the circumstances, there was just one thing to do, to get out of this cross fire and to withdraw behind the crest. I gave the order to withdraw the guns by hand, no mean job in the heavy plowed ground and the considerable distance over which the guns had to be moved. To our good luck, all the hostile heavy gun projectiles struck in front of the batteries. They were not quite correct for deflection. A hit would have done great damage. I do not believe that I am far wrong in making the assumption that the position of my battalion was communicated to Fort Manonviller by telephone from one of the neighboring villages, perhaps from Chazelles, being probably sent in by one of their

patrols or by the inhabitants, a fact which we later observed quite frequently:

"On Hill 297, northwest of St. Martin, hostile artillery." The artillerymen in the Fort which fourteen days later was blown to pieces by our 42 cm. howitzers, needed only to set off the proper azimuth in their revolving turrets, and fire could at once be opened at a range which had been previously accurately determined. And this is no doubt the way it also happened. The enemy was completely successful in his attempt to lure us by his voluntary withdrawal, within the range of his fortifications, but his guns which no doubt were 15.5 cm. guns, should have done better shooting.

Two of our batteries had already withdrawn their guns to a position behind the crest and had reloaded them. Some time later, one of the battery commanders assured me that his men had never in time of peace moved the guns quite so quickly, nor the ammunition wagons which were almost full. Due to the hurried withdrawal, a considerable number of ammunition baskets were left in front, nearly all of which were later carried back. The third battery which was not within sight of the Fort held its position for the present and continued to fire alone on its opposite target.

In the mean time the fire of the hostile artillery from the Fort had reached the position of the limbers some appreciable distance in our rear, whereupon the limbers moved away at a slow walk, going obliquely to the rear, not however without suffering some losses in men and horses. The French—in keeping with their methods of fire—had also shifted their fire laterally and now systematically searched the whole terrain. In doing so, a few shrapnel burst among our cavalry which had moved out of the fire swept zone by going to the right rear. Here also some damage was done and, as was to be expected, disorder was also created because the horses of their own accord immediately turned about in this shower of bullets. The regiment was however shortly afterwards again assembled in good order. It was still impossible to fix definitely the position of the French light batteries. I continued to have constant observations made, and especially had the terrain searched in the direction of the furrows made by the projectiles which

clearly gave us two different directions of hostile fire. I also had some French shrapnel fuses picked up in order to determine the ranges therefrom. But since these were graduated in seconds and not in meters and a range table was not at hand (later on they were furnished to us) a determination of the range was not possible.

From Fort Manonviller about twenty shots in all were fired, of which number a few struck among the machine guns to the left of our line without doing any damage.

About this time, after the firing had been going on for about a half-hour, the Division Adjutant came riding up and called to me from a distance: "The Division will withdraw in the direction of Chazelles. Your battalion will follow under the protection of the 26th Brigade." I transmitted the order through the batteries and had the limbers brought forward in order to limber up under cover. This took considerable time on account of the losses in horses and men which had just been suffered and also on account of the long way which they had to travel. It took even longer to bring up the horses of battalion headquarters which were hidden in a fold in the terrain. Finally everything was ready for marching and the battalion left the position at a walk. All individual attempts to take up the trot without command and before the proper time, were suppressed by the battery commanders and thus two of the batteries got out of the fire swept zone well closed up and in good order. The hostile fire had already died down considerably when the guns were withdrawn behind the crest. In the hollow in rear there lay an ammunition wagon of the 3d horse battery with the lead horses killed, also a limber, the team of which had also to be changed. Just as the batteries in their retirement had passed through the village, I heard behind me a lively fire coming from the direction of our former position, a circumstance which I was unable to explain. Not until we had reached a point about three km. from the former position, an agent from the second battery came toward us at a gallop and requested that ammunition from the light ammunition column (combat train) be sent forward because there was some danger of the ammunition running short. To my surprised inquiry whether the battery had not limbered up

and followed the others I received the reply that it had not and that the battery had received no order to withdraw.

In spite of the fact that the batteries were emplaced quite close to each other and that the limbering up of an adjacent battery would immediately have been noticed in time of peace, the battery on the left flank of the battalion was still so busily engaged with the enemy, that no one had observed the departure of the others thus leaving this battery all alone under the fire of the enemy, where under the circumstances it might have suffered capture by a more energetic opponent. The order simply did not sift through. Visual communication was impossible due to the nature of the terrain in the position. In the haste made in this fight, where everything depended upon rapidity since the duration of the fight promised to be short, the telephone was not laid, notwithstanding that the regulations prescribe that telephone communications shall be established also when in open positions. The fight was a combat of surprise or pursuit from which later I immediately drew the proper warning and lesson. I felt great anxiety about getting the battery back again and at once sent back for it. Beyond the village, a halt was made. In passing along the two batteries which had now dismounted, I received the reports of the losses. In this connection the junior officer of the third battery reported that the captain and the first lieutenant of his battery were missing and were probably left behind wounded, a report, which as later information proved, was incorrect. As a matter of fact both had remained behind in order to rescue a caisson which had been abandoned and which they did not wish to leave in the territory of the enemy under any circumstances. At this moment, His Excellency, the Division Commander came back and enquired concerning our casualties, which I was able to report as being very slight. At the same time I informed him of the reported wounding of the two aforementioned officers which report immediately spread throughout the entire division.

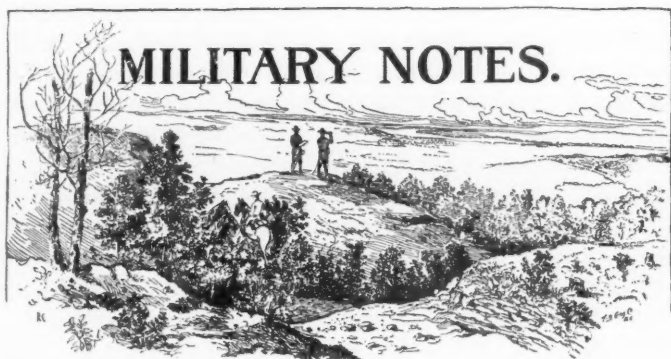
The second battery which was engaged with the enemy for a half-hour longer at last also rejoined the battalion. I was glad to have it again and, as it turned out, without having suffered hardly any losses. This first day of our baptism of

fire did not impress upon us a very high opinion of the firing of the hostile artillery and this opinion remained the same concerning the firing of the heavy artillery. Where real success is not attained, the moral effect will also soon vanish. Every one in the battalion took courage in the feeling: "Well, if this is the worst we may expect, and if the French do not shoot any better than this, especially when they have us in an open position, then we can look forward to the coming battles with full confidence." Later on there were days when the French did shoot better, and made a greater impression upon us in their methods of fire and in the rapidity of their adjustment, than in that day at St. Martin.

On the way back to the place where we were to be quartered I receive a message from our regimental commander who from the heights at Igney had observed our fight through his glasses and who, basing his judgment upon the heavy fire of our opponents, was more or less resigned to an expectation of heavy losses in the horse artillery battalion and therefore wished to express his appreciation and thanks for our brave resistance. The concluding sentence of his message pleased us most: "The hostile cavalry division fled in a mad rush on the road to Luneville, showing unmistakable signs of panic and noticeable losses."

In addition to this very pleasing message, it was also gratifying to hear the thanks and the ungrudging appreciation of our friends of the cavalry with whom we later on fought shoulder to shoulder for several weeks.

This then was our baptism of fire. Only on rare occasions did we later gain a success which was any way near so pretty or so distinctly fruitful in results.



CAVALRY INSTRUCTION.

HEADQUARTERS FIRST CAVALRY BRIGADE.

Fort Sam Houston, Texas, August 26, 1915.

General Orders No. 13.

Combat Exercise No. 9—Pursuing Patrols:

1. In the performance of patrolling or reconnoitering duty it often becomes necessary to trail and pursue small parties of the enemy. Such small parties will not, as a rule, fight unless they are forced to, or unless they secure an opportunity to surprise and ambush our patrols or pursuing parties, in which case flight will, as a rule, immediately follow the surprise, whether successful or not.

2. The particular endeavor of such parties of the enemy is to rob and to kill inoffensive citizens. In proportion to their numbers, small bodies of the enemy are likely to do the greatest damage, and are most difficult to kill or capture. The smaller the party, the more difficult it is to trail.

3. To inflict any damage on such an enemy, surprise is necessary.

4. The presence in the country of such a raiding party is usually first known by the reports brought of depredations committed. The commander of the force sent in pursuit should first, if practicable, secure the services of one or more men who are good trailers and scouts, and are acquainted with the country, the people and the prevailing language; otherwise, enlisted scouts should be used. Such scouts should be well mounted and armed. They should ride in advance with a few men detailed as advance guard. The precaution of having an advance guard should never be dispensed with. The detachment should be provided with rations and forage, (part of it carried on the horses and part on pack animals) with a view to making a long and continuous ride where the cooking of meals may be impracticable. The animals should carry light loads. The methods of the forced march (see G. O., No. 8, these headquarters, Mar. 10, 1914) should be adopted.

5. In readiness for such expeditions rations and forage should always be kept packed, so that the start can be made within half an hour after the alarm.

6. Having picked up the trail, it is necessary that the commander of the detachment should decide as to the rate of march. If, for instance, the enemy is driving loose horses, it is probable that he will not move at a gait greater than four miles an hour. If then the enemy has five hours start, he will necessarily have a lead of about twenty miles, which has to be made up. By marching alternately at a walk and a trot, say, six miles an hour, the enemy will be overtaken in about ten hours marching. If a rate of eight miles an hour is kept up, the enemy should be overtaken in about five hours. If, however, the pursuers march at only four or five miles an hour, it is evident that if the enemy is overtaken it will be only by the merest chance.

7. In the determination of the gait to be taken up much depends upon the coolness and humidity of the weather, the condition of the horses and the weight of the horses' load. In a country interspersed with wire fences and roads, as is

the country along the Rio Grande, the problem of following a trail should be much simplified. By watching the ground along the wire fences it should be possible always to discover where they have crossed. If the enemy is moving on a road, by watching the borders of the road the place where his tracks leave the road should be discernable.

8. It sometimes happens that the enemy scatters to reunite at some point in the vicinity. This is usually done by having men drop out every few paces to take a new direction, usually at right angles from the road. When it is apparent that this has been done, it becomes necessary to scout on the circumference of a circle of considerable radius extending around the place where the tracks have disappeared until the new trail has been found.

9. Close questioning of the ranchers and natives will often secure considerable information. Inhabitants should be questioned separately. Often children will give information of value.

10. The art of following and reading a trail is one of the utmost value and importance to cavalry. If on the trail of the enemy there is a peculiar mark made perhaps by a horse with a peculiar foot, or a footman with a peculiar shoe, or by a trailing rope, the trail is much more easy to follow. It should be possible to tell by the tracks the number of horses and footmen, the number of mules, and the gait at which the enemy is marching. If the trail is fresh the horses' dung shows it; the shoe prints are moist; the side of the impression in the soil is abrupt, the wind not having had time to fill it with dust; the stones moved by the horses' feet show an undersurface which is not yet dry; the sticks and grass seem freshly broken.

11. Across hard and rocky ground the trail must be followed by noticing where the grass has been broken, and where the pebbles have been turned bottom up. The upper side of a pebble which has been exposed to the rain is clean, the lower side is covered with dirt.

12. A difficult trail must, as a rule, be followed by fixing the eyes on the ground at a point thirty or fifty feet in advance, thus following the slight disturbances on the ground caused

by the hoofs of the animals. If the trailer looks directly down he will soon lose the direction and is liable to get off the trail. Much practice in following trails should be given the enlisted scouts of a command in order that they may become proficient.

13. When the trail becomes "*hot*"—that is, when the pursuers have reached a point near the pursued—it will become necessary to decide upon the attack. It is not unlikely that the enemy has a rear guard of one or two men, who will give the alarm in case it is attempted to attack him while en route. If it is apparent that the enemy is making towards a certain point or a defile, it might be well to take part or all of the detachment on a circuitous route and post them in ambush on his line of march.

14. If the time of day, or length of march, or nature of the country indicates that the enemy is about to camp, it would be well to halt, send out dismounted scouts, reconnoiter his position and make arrangements for an attack at dawn. Every means should be taken to inflict punishment on the personnel of the raiding force, as well as to capture their booty. In case the attack succeeds and the booty is captured, great care should be taken to prevent the command from being ambushed while on its return march. Immediately after the enemy's camp is captured and his forces are dispersed, a considerable detachment should undertake to prolong the pursuit to pick up stragglers and to prevent his scattered forces from uniting.

15. Troops engaged in such expeditions should employ to the limit the best methods of security and information. The enemy knowing that he is pursued will make use of every stratagem to ambush the pursuers. Ranches and suspicious places should be approached cautiously. The advance guard should ride well in front of the command, and flankers be used as far as practicable. Territory beyond the fences bordering the road should be reconnoitered. Great care should be taken to prevent the troops when in camp from being surprised, by the liberal use of outposts. Such outposts should occupy positions not only concealed from the enemy in front, but which give protection from his fire by means of sandbags or natural cover.

16. In this connection read "Indian Scouting," Chapter 9, Wagner's "Security and Information." To prepare troops for duty as pursuing patrols, and to perfect enlisted scouts in trailing, this exercise should be constantly practiced.

BY COMMAND OF BRIGADIER GENERAL PARKER:

JOHN H. READ, JR.,

First Lieutenant, Third Cavalry, A. D. C.,

Acting Adjutant.

INSPECTION OF CAVALRY EQUIPMENT.

A Uniform Method.

BY CAPTAIN H. J. MCKENNEY, TWELFTH CAVALRY.

FOR the purpose of securing a uniform method of laying out, for inspection, all the articles of equipment carried by the cavalry soldier, in the field, the following scheme has been evolved. The method is based on a logical system, which makes it easy for the soldier to remember and reduces to a minimum the time and labor of the inspecting officer.

The basis of the method is that all articles are laid out for inspection, as nearly as practicable, in the same relative positions as when carried on the horse, as prescribed in paragraph 190, Cavalry Drill Regulations, 1902, corrected to January 1, 1911. Everything which is carried on the horse on the off side is displayed for inspection on the off side of the bed blanket. Likewise, everything which is carried on the horse on the near side is displayed for inspection on the near side of the bed blanket. Articles which are carried on the pommel and cantle, as well as the surcingle and everything carried in the bedding roll, are displayed in the middle of the bed blanket, between the articles which are displayed as being carried on the two sides of the horse.

It is believed that this method makes it easy for the soldier to remember, at least, the general location of each article and easy for the inspecting officer to detect whether or not any article is missing, if he bears in mind the method.

The paragraph in the Cavalry Drill Regulations, mentioned above, was the guide in the relative arrangement of the articles, with the following exceptions. The *feed bag* is carried instead of the nose bag and when carried empty, the *feed bag* is carried folded flat and strapped over the middle of the blanket roll, on the cante. The change in the Uniform Regulations which requires that the *wire cutters* be carried, by those men to whom

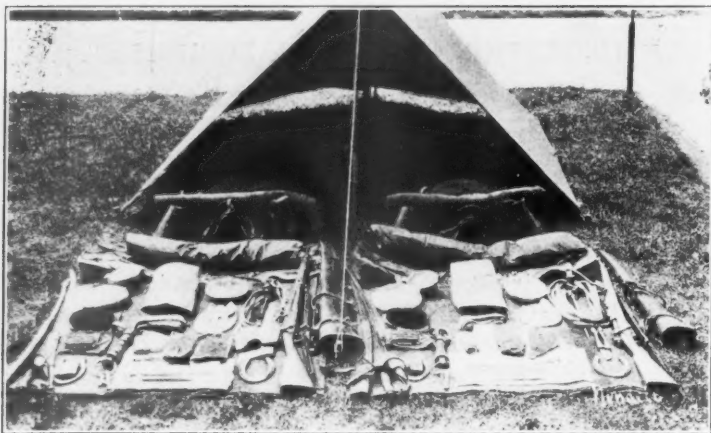


PLATE I.

they are issued, in the near saddle pocket. Also, G. O., 3, W. D., 1915, is complied with as to the amount of clothing and toilet articles carried in the blanket roll.

The following describes the arrangement in detail, from the off to the near side (See Plates I and II).

(a) The saber is drawn and placed beside the scabbard. This is done in order that the inspection may be facilitated and the articles need not necessarily be handled.

(b) The curry comb and horse brush are placed tooth and bristle side up, for the same reason as (a), above.

(c) The leather packet inside the fitted horseshoe, on the left off side, is a packet made of three folds of leather, soaked in oil, the twelve horseshoe nails, required to be carried, fitted in slits inside and protected by flaps which fold in. The whole is secured by a rawhide thong. Troop stamp and man's troop number are stamped on the outside.

Soaking the leather in oil keeps the nails oily and free from rust at all times.

(d) The watering bridle is placed with the bit end to the front, toward the inspecting officer, for the same reason as (a), above.



PLATE II.

(e) The clothing is laid out (in the middle of the bed blanket, at the front) so that a portion of each article protrudes from under each article laid on top, so that everything can be seen and checked, at a glance—without handling—from bottom to top: Towel, drawers, undershirt, and two pairs of stockings, each pair of stockings being laid out separately. The Plates show the equipment of men who carry the Housewife for the squad (G. O. 3, W. D., 1915.)

(f) Plate I, shows on the off side of the tent, the equipment of a man who carries a camp hatchet (also, shows leather carrying case over the helve of the hatchet). Plate I, shows on the near side of the tent, the equipment of a man who carries wire cutters.

(g) In rear of the articles on the bed blanket are the saddle pockets, detached from the saddle, spread out, with slicker (or overcoat) laid over the saddle pockets.

(h) In rear of the saddle pockets and slicker is the saddle, pommel to the front, cincha, cincha strap and stirrups crossed,



PLATE III.

hood of stirrups to front tread on ground with the saddle blanket spread over the saddle, moist side up (to dry, as prescribed in next to last sub-paragraph., paragraph 778, Cavalry Service Regulations, 1914) and curb bridle rolled with reins passing through loop placed on top of saddle blanket, crown piece toward the off side.

(i) Plates I and II show the equipment of men who may be absent from their tents on picket line guard or other duty. Their rifles are with the rest of their kit so that they can be inspected. Plate III shows the position of the men (under arms) when they stand by their equipment for inspection.

The method may be used when shelter tents are or are not pitched. When pitched, the arrangement is as shown in the plates. When they are not pitched, the shelter tent is spread out flat, in rear of the saddle and the poles and pins are displayed on top of the shelter half.

THE GREAT WALL OF CHINA.

BY LIEUTENANT COLONEL F. SAYRE, SEVENTH CAVALRY.

THE Peking-Kalgan Railroad makes it much easier to visit the Great Wall of China than was the case a few years ago when it was necessary to organize a party of coolies and cooks and spend two weeks on the trip. This railroad follows for 125 miles an old trade route which runs northwest from Peking through Mongolia to Europe and which has been used by caravans for thousands of years. Trains of camels, donkeys and wolly Siberian ponies are still to be seen moving in both directions at short intervals along this old trail, which is totally unimproved and could not be used by wagons anywhere.

About thirty miles from Peking the railroad and the old trail leave the great plain of North China and enter a pass in the mountains called Nankow Pass. At the entrance to the Pass a large brick wall is seen, in a somewhat tumble-down condition; and two other walls, but little inferior in construction to the Great Wall, are seen crossing the Pass before the Great Wall is reached. But the three walls first seen are comparatively short. The first branch of the Great Wall is reached at Ching-lung-chiao, a railroad station thirty-six miles from Peking. This branch follows the watershed of the mountains which bound the great plain of China on the north. In some places it ascends steep slopes; in others, as at Ching-lung-chiao, it crosses mountain gorges; but for the most part it stands on steep, rocky and almost inaccessible ridges. Its elevation at Nankow Pass is 1600 feet, but parts of it are 4000

feet above sea level. It is from twenty-five to thirty feet in height, about twenty-five feet thick at the base and about fifteen feet thick at the top. The top (terreplein) is paved with brick and is abundantly wide enough to drive a team on, but it would not be easy to do this in all places, for the wall sometimes ascends slopes so steep that a man cannot make his way along it without using his hands. At both north and south sides of the terreplein are walls about three feet high, built of granite blocks, the north wall crenelated, the south wall continuous. The foundation and about ten feet of the superstructure of the retaining walls which form the north and south faces are built of dressed granite blocks, each estimated to weigh about 600 pounds. The remainder of the retaining walls is built of burnt brick, each brick about twice as long, twice as wide and twice as thick as the bricks now used in housebuilding. The space between the retaining walls is filled in with cobblestones. There are large square towers at intervals of 600 yards. Near each tower an arched doorway is found in the south side of the wall, leading to stone steps which bring you out on top of the wall.

The bricks are of a grey color and of flinty hardness. The brick and the granite blocks are cemented together with a white cement too hard to be cut with a knife. The brick must have been made down in the plain, twelve to fifteen miles away; there are brick-kilns there now, turning out brick of the same color as those in the Great Wall. The cobblestones and the granite blocks must also have come from a distance and the task of getting them to the site of the wall seems, in some places, almost superhuman.

The Great Wall is not so high nor as thick as the wall surrounding the Tartar City of Peking, but the Great Wall is stated to be 1500 miles long, while the wall about the Tartar City is only thirteen miles long. The Chinese call the Great Wall "The Wall of Ten Thousand Li." Figuring three li to a mile, this would make the wall over three thousand miles long, but I presume the Chinese name is figuratively rather than literal.

The length of the Great Wall is the factor which gains for it the credit of being the greatest piece of constructive work

ever accomplished by the human race. Beside it the pyramids of Egypt and the Panama Canal seem small and cheap.

The oldest branch of the Great Wall is found at Kalgan, 125 miles from Peking. This branch was built entirely of brick and much of it has fallen down or been torn down for building materials. It was begun by the Emperor Shih-hwang-ti in 214, B. C., but it is difficult to believe that even one branch of this wall was completed during the lifetime of one man. The branch seen at Nankow Pass is still in a practically perfect state of preservation; this branch is said to have been built in the seventh century, A. D., and to have been rebuilt or repaired by the Emperor Yung-lo (one of the Mings) in the fifteenth century, A. D. It is said that parts of the Great Wall were hurriedly repaired and mounted with cannon of antiquated type during the war with Japan in 1894. There are two iron field guns of a pattern long obsolete lying on the ground near the Wall at Nankow Pass.

The Great Wall has been attributed to a policy of "exclusion and seclusion" on the part of the Chinese emperors. On this account the American protective tariff has been compared to the Great Wall of China, because it excluded foreign products from competition with our own. But there are gateways in the Great Wall on all of the trade routes and there is no proof that these gates have ever been closed to merchants or to peaceful travelers. It is more probable that the Great Wall was built as a national defense. The only enemies of whom the early Chinese had any knowledge lived to the north, in Mongolia and Manchuria. The Great Wall seems to represent a policy of national defense continued through many centuries, and it is significant that the latest branch of the Wall is 100 miles south of the first one.

The Great Wall of China is the most complete, the most costly and the most futile scheme of national defense ever adopted by any nation. There is no proof that the Wall ever checked an invasion or even delayed invaders by so much as a single day. Since the first Wall was built, two centuries before Christ, China has been subjugated and ruled over by the Mongols and by the Manchus in turn, and these invaders have never been driven out except by aggressive warfare—

by Chinese soldiers bearing weapons in their hands. The Mongols and the Manchus were both inferior to the Chinese in numbers, in wealth and in civilization.

In 1860 China was conquered by the French and English, in 1894 by the Japanese and in 1900 by an allied army composed in part of Americans. Each of these defeats has resulted in important concession being wrung from the Chinese and the preservation of their autonomy is due only to mutual jealousies between other nations.

A parallel to the Great Wall of China is to be found in the line of fortifications built by the Romans during the later years of the Roman Empire along the Rhine and Danube Rivers and between the sources of these rivers; the invasions from the north which eventually resulted in the destruction of the Empire began at no great interval after the completion of these fortifications. Is it possible that some resemblance to the Great Wall of China is also to be discerned in the scheme of sea coast defense inaugurated by the United States Government about twenty years ago?

THE PERSIAN ARMY—THEIR HORSES, ETC.

TEHERAN, PERSIA, August 13, 1915.

The Editor:

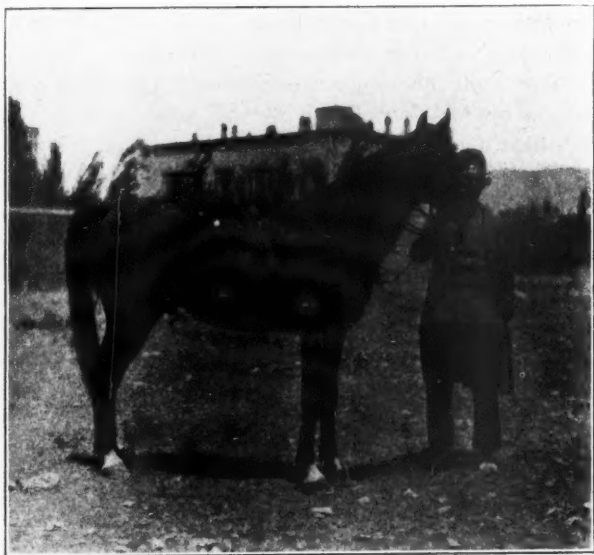
[F of interest to your readers, you are at liberty to use the inclosed photographs and the following notes:

The photographs numbered 1 and 2 are of Colonel Zorab Khan on his Arab horse; those numbered 3 and 4 are of the same horse unsaddled and of himself dismounted. The one numbered 5 is of my own Turcoman horse.* Please notice the old style U. S. A. web cartridge belt used as a bandoleer around the horse's neck—the two suspender straps carried back, one on each side, and hooked into rings on the saddle. The

*Of the photographs mentioned, only Nos. 3, 5 and 7 are here reproduced, as best showing the type of Arab horses.—*Editor.*

Indian Cavalry has this same idea as is shown in the cut numbered 6, which I clipped from the March, 1915, issue of *Popular Mechanics*. Before seeing this, however, I got the idea from the Central India Horse, who were stationed at Shiraz in South Persia.

As I have ridden from Teheran to Shiraz and back on my Turcoman, using this bandoleer, I can speak from experience. It does not seem to tire the horse and, if not strapped on too tightly, it does not rub off the hair, and is a most useful reserve



No. 3.

of ammunition in an emergency. I averaged thirty miles a day, on both journeys, and I could not see that the horse was inconvenienced by it. The distance from Teheran to Shiraz is 650 miles.

The small wiry, Arab of the style ridden by Colonel Zorab Khan is the type most esteemed in Persia; they are capable of much endurance on poor feed and can make extraordinary long marches day after day. The best Arabs come from the Persian Gulf country, around Ahwaz, Mohammcrah and

Shiraz. A horse like Colonel Zorab Khan's is valued at 400 tomans—a toman is worth about ninety cents in U. S. currency. Arabs run from this price up to 1,500 tomans.

If desirable for remounts in the United States, it would be very feasible to buy stallions in the Persian Gulf ports and ship them direct to New York in the annual date carrying steamers which are fast boats. I would be very glad to arranged with the Persian Government to facilitate this work if it is undertaken.

In general, I believe that pure blooded stallions and mares could be procured under 1,000 tomans each, even now when the war is going on just over the border in Turkey.

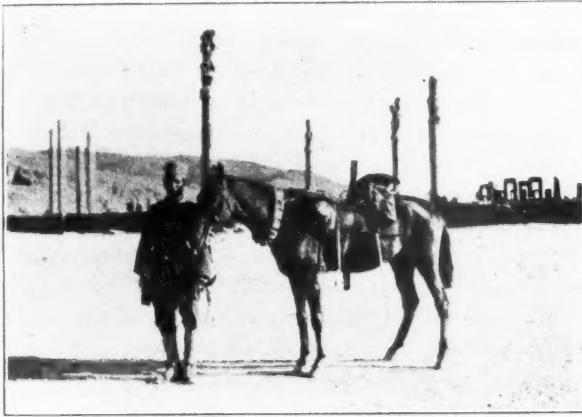
Persian light horsemen undoubtedly can march longer and subsist on less for both man and horse than any other like organization in the world. I made two marches with the Persian troops as an observer. The longer of the two expeditions was from Teheran to Hamadan, about 250 miles. The cavalymen carried carbine, cartridge belts—several of them, often five or six—halter rope, picket pin and blanket roll—nothing else. The horses in town get two maunds of wheat or barley straw, one-half maund of hay and two maunds of barley per day (a maund is equal to six and one-third pounds), but on the march they are lucky to get a maund of barley, with usually no hay at all, and one and one-half maunds, or less, of straw. No transportation is used and men and horses live on the country.

The soldier's ration consists of one-half maund of wheat bread per day when at their station with heavy and wholesome soups of meat and vegetables, and now and then some Persian cheese. On the march he is lucky, and satisfied, mind you, to get a half-maund of bread with a small handful of cheese, together with a few tiny cups of tea per day.

The column averaged forty miles every day we marched and this over an almost waterless, hot and dusty, alkali desert. I did not see either any stragglers or disabled horses, which speaks volumes in itself for the sturdy Arab blood in the Persian horses. Nearly all of these horses were of a mixed breed, Arabs crossed with native Persian stock. The Persian horseshoe, because of the small stones on the desert, covers

nearly all of the sole of the foot and frog, except a small opening of about one and one-half inches in diameter in the center. The shoes are much thinner than ours and rarely last more than two weeks of hard service. At the same time, one can gallop a Persian horse with impunity over a rocky course that would result in disaster to our cavalry horses.

The saddle generally used is the Cossack saddle and a poorer saddle it would be hard to find. The stirrups are set far back and the stirrup straps are extremely short and, except with the utmost care, the horses get bad sore backs. A light



No. 5.

model of the Indian cavalry saddle is being introduced, which so far has proved satisfactory, except that the Persian saddle makers have great difficulty in properly copying the Indian saddle tree.

The Persian stables are usually too illy lighted and ventilated, especially in winter, but decided reforms in that line are being carried out. The manure is sun dried and pulverized and is used for bedding. Strange as it may seem, this bedding is most satisfactory and the horses are not as much soiled by the use of it as by the bedding used in our army. I served under Captain Guy V. Henry, Jr., in the U. S. Cavalry at

Batangas and can, therefore, speak from experience as to the relative merits of the two kinds of bedding.

All of the horses in the Persian cavalry are stallions and contrary to what one might expect, we have practically no trouble from unruly horses. The Persian stallions, unless they have been used for breeding purposes, are very rarely of ugly temper or hard to manage.

We use the single rank formation. I have much enjoyed the numerous articles pro and con on the subject of the single rank in the *CAVALRY JOURNAL*, and am a hearty believer in the single rank, and this in a country of no fences, with vast plains, but with plenty of deep ditches near the villages where a double rank would surely meet with disaster.

In stables, each horse has a leather strap around his leg, just above the hoof. This strap is buckled into the ring of a chain about five feet long, which chain is attached to a stout steel pin which is driven into the ground directly in rear of the horse and distant the length of the chain.

The manes and the forelocks of the officers' horses are cut close, while the tail is trimmed so as to come to the hock. The manes and tails of the cavalry horses are not cut.

A solution of henna is much used in crossing alkali deserts; it is painted on the horses' legs, half way up to the knees, and is very effective in preventing irritation.

The walls of the stables are of sun dried mud; the mangers are made "V" shaped in front and square behind, opening directly into the walls. The horses are tied to rods sunk into the wall and imbedded in the mud; each horse is tied to a rod both to his right and left so that he cannot get at the horses on his right or left, even if he desired.

Salt is seldom fed to their horses by the Persians. The manure, when it accumulates, is sold for about nine cents a sack to the baths in town to be used as fuel. It is also the fuel for the soldier's kitchens. The Swedish, straight saber has been introduced into the gendarmerie cavalry but it is too heavy and unweildy for the slightly built Persians.

The Persians are born horsemen and under European officers make excellent soldiers. They are patient, give little trouble as regards discipline and require a minimum of barrack

comforts. They have no beds and have only a straw filled mattress, a pillow and a sort of blanket made of a cheap Manchester print goods, stuffed with cotton. They are supplied with a summer and winter uniform but no underclothes or socks. They are issued shoes which are in much need of improvement. In summer the men wear "giveers," a low shoe which is made with soles of tightly compressed cloth strips and cotton cord uppers, much like the Spanish alpara-



No. 7.

gatos of the Philippines. Puttees are worn as a part of the uniform.

The barracks are not heated in winter but each room has an allowance of charcoal which is burned in an open pan. Desertions are rare. The men are armed with the Mauser carbine and the Russian army rifle, with a few French Lebel's. The only mess utensils is a copper bowl of some two quarts capacity which is re-tinned once a month. The uniform is khaki, both for summer and winter wear, which blends perfectly with the

dust colored plains. Khaki, by the way, is not *Hindustani*, as a recent correspondents of the *Army and Navy Journal* avers, but a Persian word which means "*dust*"; exactly, it is "*khak*," meaning dust, and khaki is the genitive meaning "of dust," that is the color of dust. The *Hindustani* is merely old Persian and is a language that sprang up as a result of the Persian invasion of India.

The photographs Nos. 7 and 8 are of "yours truly." The horse is a Turcoman, that is half Arab and half Turcoman stock, a sturdy horse with great endurance.

J. N. MERRILL,
Colonel Persian Army.
(Ex-Class 1906, U. S. M. A.)

POLO INSTRUCTION AT THE MOUNTED SERVICE SCHOOL.

THE following letter, furnished by the Commandant, Mounted Service School, describes the approved system of polo instruction and conditioning of polo horses, in vogue at the School.

The Commandant states, as a matter of general interest, that the playing of polo is not permitted for the First Year Class, because it is a matter which should be developed in the regiments, and because its inclusion in the course for the First Year Class would necessarily crowd out much of great importance which cannot well be taught or developed in the regiments. An important consideration, too, is the fact that if First Year Officers were permitted to bring to the School their private mounts (including polo horses), it would be absolutely impossible for the present school detachment to groom these animals in addition to the many duties now required of the members of the detachment.

Therefore, the playing of polo at the Mounted Service School, is confined to the Second Year Class, but with this class

it is made an important part of the curriculum, approved by the Secretary of War, with the object of graduating officers fully competent to return to their commands and captain regimental polo teams.

A special instructor is placed in charge of officers and horses, regular lectures are given on the theory of polo, illustrating team-work by means of movable figures on a board representing a polo field; and later on, officers are given systematic instruction in conditioning polo horses, training green animals and in individual and combined work as members of regular teams.

While of course the personality of the individual and the rare quality of leadership will have an important bearing on the success of graduates of the School as instructors of their regimental polo teams, the above system appears to be the one best calculated to develop polo in the mounted service, without detracting from the usefulness of the School in many other lines of work, equally important to the service.

LETTER.*

1. The system being followed to condition the polo horses and to instruct the Second Year Class in the principles of polo is herewith submitted for the approval of the Senior Instructor:

2. There are eight private, two artillery, and sixteen school horses undergoing training.

3. In striving to develop horses that will play a fast game and do so quietly, it has been explained that the three qualities prerequisite to success are:

- a. Disposition.
- b. Strength and endurance.
- c. Tractability and handiness.

Without the first the presence of all the others does not as a rule make a desirable horse. Possessing the first and being

*Heading of letter is omitted.

of suitable type, a patient horseman should be able to develop the latter.

4. It is thought that most Army Polo is characterized by:

- a. Horses in unfit physical condition.
- b. Balky and unmanageable horses.
- c. No team work, loud yelling, individual playing, etc.

The members of the class have been told that in School Polo there must be no instances of the above.

4—A. The object of all physical training being to remove superfluous fat, strengthen the muscles and sinews and develop the wind, the following methods are being used to prepare the polo horses for the work required of them:

- a. From 7:00 to 9:30 A. M., a walk of about eight miles.
- b. On Saturdays and Sundays, the horses not being used in the afternoon, the morning walk is increased to ten miles.
- c. One and a half hours in the afternoon alternately galloping and walking. Each day the galloping periods are slightly increased and the walking periods slightly decreased.
- d. After the morning and afternoon exercises the horses are thoroughly rubbed down and groomed.
- e. Each horse when taken up has been started on a feed of five pounds of oats daily, divided into three feeds. This daily feed is gradually increased until a maximum of ten pounds of oats and two pounds of carrots is reached. The grain component is divided into feeds of three, three and four pounds, respectively. The carrots are thoroughly washed, sliced lengthwise, and fed between meals.
- f. Horses are watered at 7:00, A. M., 11:00, A. M., 4:00, P. M., and a bucket of water is placed in each manger after evening feeding.

4—B. A horse is balky, unmanageable or nervous on the polo field because he has been pushed beyond his capabilities; and in consequence he fears the work about to be required of him. Every effort is being made to prevent the appearance on the polo field of horses with such traits.

a. The long walks in the morning tend to quiet the horses.

b. Horses are not exercised over the same ground two days in succession. The varied ground and sights appear to hold the horses' interest in their work, and eliminate to a certain degree the nervousness incident to new sights, sounds, etc.

c. In all the work only such gaits are taken that will be taken by all the horses freely and quietly.

4—C. All the officers have been asked to specify the position which they desire to play, and have been told that in all games they will play this and no other position. This should develop team work, which is the secret of success in polo. There are innumerable instances where a team of the best players has been beaten by a team of mediocre players who understood one another and had mastered the principles of team play.

* * * * *

6. The horses in the squad are, with a few exceptions, horses of quality and substance, activity and endurance, breeding and strength.

INNIS P. SWIFT,

First Lieutenant, Second Cavalry.

POWDERED HELLEBORE TO PREVENT FLIES BREEDING.*

*New and Safe Method of Destroying the Larvae of the Pest
Discovered.*

A SAFE and effective weapon against the typhoid or house fly has been found in powdered hellebore by scientists of the Department of Agriculture. Flies lay their eggs chiefly in stable manure. Powdered hellebore mixed with water and

*Details of the experiments with other information on the subject are contained in a professional paper, Bulletin 245 of the United States Department of Agriculture.

sprinkled over the manure, will destroy the larvae which are hatched from the eggs. Since powdered hellebore is readily obtainable, this puts in the hands of everyone a remedy for one of the pests that been found dangerous as well as troublesome. Powdered hellebore, however, will not kill adult flies which must be swatted or trapped.

It has long been known that flies breed in manure but previous methods of destroying the larvae there by the use of strong chemicals have been open to the objection that the treatment under some conditions lessened the fertilizing value of the manure or actually injured vegetation. This is not true of powdered hellebore. Government experiments have shown that the hellebore is entirely decomposed in the course of the fermentation of the manure and that even in excessive quantities it does no harm except to the larvae it is intended to destroy. Chickens picking in manure treated with it suffer no ill effects.

One-half pound of powdered hellebore mixed with ten gallons of water is sufficient to kill the larvae in eight bushels, or ten cubic feet of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. In most places hellebore is obtainable in 100 pound lots at a cost of eleven cents a pound. This makes the cost of the treatment a little less than seven-tenths of a cent per bushel of manure. A liberal estimate of the output of manure is two bushels a day per horse. The money involved is, therefore, trifling in comparison with the benefits to the individual and the community from the practical elimination of the disease-spreading fly.

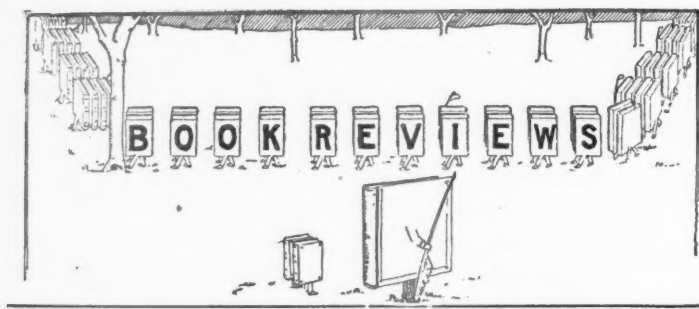
Although fresh manure is the favorite breeding spot, flies lay their eggs in other places as well, such as outhouses, refuse piles, etc. In these places, from which no manure is taken to spread on the fields, considerable saving may be effected through the substitution of borax for powdered hellebore. Applied at the rate of 0.62 pounds per eight bushels of manure, borax is as effective as powdered hellebore in killing the larvae but costs less than half a cent for each bushel of manure treated. In larger quantities, however, or when the manure itself is spread at a greater rate than fifteen tons to the

acre, some damage to crops may result. Large quantities of manure are often used by market gardeners and others, and there is always danger of carelessness in applying the borax. The use of the more expensive but safer hellebore is therefore recommended for the treatment of manure. Borax is recommended for all other refuse in which flies may lay eggs.

Scientists who have been working for years to eliminate the fly are convinced that the use of one or the other of these simple measures is a public duty wherever manure and refuse exist. Sanitarians, however, strongly advise the removal of refuse heaps or other unnecessary rubbish or breeding places for flies. In breeding places which cannot be thus disposed of, such as manure or stables, the daily use of powdered hellebore will keep the flies from breeding in these favorite breeding grounds. The best results are obtainable in a community where everyone cleans up his premises, traps or kills the flies, and systematically treats the manure and other breeding places with powdered hellebore.

The fly is not only a nuisance to human beings and live stock; it spreads disease and filth and is a menace to public health which cannot be tolerated in the face of a demonstrated remedy.





**The
American
Army.***

This book might well be studied by every American who believes that we should place our military house in order.

General Carter paints for us a graphic word picture of the danger that lurks in military unpreparedness.

We must no longer pat ourselves complacently on the back in commendation for former successes, which a careful analysis shows could have been won with a much less expenditure of blood and treasure had we been but half-way prepared. On the contrary, we must realize our past failings at once and set about providing a military and naval system which will save us from defeat and humiliation in case war should suddenly be forced upon us.

General Carter points out the danger that lies in depending, to any great extent, upon our present National Guard, in any emergency.

The provisions of the Constitution of the United States make it impracticable to use those forces outside the limits of the United States. Moreover, it is doubtful if the Militia of

*"THE AMERICAN ARMY." By Major General Harding Carter, U.S. Army, author of "Old Army Sketches"; "Horses, Saddles and Bridles;" "From Yorktown to Santiago with the Sixth Cavalry," etc. 294 pages, 5½" by 8". The Bobbs-Merrill Company, Indianapolis. Price \$1.50, net.

any State, can be legally called into the service of the Government, without the consent of the Governor of the said State.

The futility of counting upon the efficacy of a system, hedged about by such constitutional restrictions, must be apparent to anyone who has seriously studied the subject.

General Carter has praise only for the National Guard, and pays a high tribute to those business men, who, in order to do their duty as members of the Militia, neglect their own affairs, and often expend their own personal means, to help organize and render efficient the troops of this branch of our military forces. What he does condemn, is the system under which these troops are enrolled. He believes that such a system will break down in time of war and advocates the adoption of another, in the near future, which will stand that supreme test.

The author particularly calls attention to the necessity for keeping great quantities of extra arms and ammunition and large forces of trained reserves ever ready for use in war.

The danger of neglecting these important matters, has been pointed out, again and again, by many of our most eminent statesmen and military writers, but the people lulled into fancied security by the beating of the surf along our Atlantic and Pacific shores, have failed to realize that steam has now made those great barriers vulnerable. No longer do they afford us the protection which we formerly counted upon nor will they save us from disastrous and humiliating defeat in the hour of invasion.

General Carter emphasizes the fact that our present Regular Army, after deducting the garrisons of Alaska, Panama, Hawaii and the Philippines, is but a mere skeleton, incapable of repelling a hostile invasion even with the assistance of the Militia. He advocates not only a larger Regular Army, but also wishes to have a depot company or troop for every regiment of infantry and cavalry, the latter to supply promptly the necessary recruits to replace the losses of battle and sickness. He also advocates the raising of a large volunteer force which shall be subject directly to the orders of the President in case of need.

General Carter also favors the organizing and keeping ready for field service of an expeditionary force of at least a division of regular troops, at some central point, as Fort Benjamin Harrison. Later, this force might be made into a field army by adding to it another infantry division and a cavalry division, with necessary field army troops.

There can be no question of the soundness of the author's views on this matter and he gives a plan by which these recommendations might be easily carried into effect.

General Carter gives a history of the birth and growth of our General Staff. It is indeed difficult for us to realize how we could have gotten on so many years without what now appears to be so necessary. Though our General Staff is not perfect, General Carter begs us to give it a fair trial before we decide to change it.

The author shows how much has been accomplished, in the past, by our Army, despite the defects of our military system, but believes that much more could have been done, and at much less expense, had we possessed, during the past hundred years, a definite military policy. He further emphasizes the fact, that our past successes, won in the face of almost insuperable obstacles, should not bind us to the necessities of the future.

Every true patriot should read this book. There is but little doubt that, after having done so, he will be ready and willing to give loyal support to any and all measures which will increase the efficiency of our Army and add to our reserves of munitions and trained men.

N. F. M.

**Back
of the
War.***

Being an ably written and wholly impartial account of the mental and physical condition of the French, German and English peoples and their respective armies during the first months of the present European War, this book gives in a clear and definite way the beliefs of each of these peoples as to why they are engaged in the struggle.

Senator Beveridge is a keen analytical observer who has used his exceptional facilities for obtaining information in an able manner and has presented his results in a most interesting way which is made more pleasing by the author's charming style and his clear concise English.

His observations during battles and at hospitals and detention camps, together with the record of his interviews with representative people of all walks of life, are likely to constitute a valuable contribution to the history of the war.

At present there is no publication which so fully and impartially presents the causes of the war and the conditions under which it is being fought.

E.

**War
of
1914.†**

"The engagements of the Army for the Defense of the Country," is the title head of a book of ninety-four pages, in the original French, published by the House of Chapelot, of Paris and Nancy. It purports to be the report of the Commander-in-Chief covering the operations of the Belgian Army during the period from July 29, 1915, the date when the Belgian Government placed its forces on a reinforced peace strength, until the 31st of December, 1915.

*"WHAT IS BACK OF THE WAR." By Albert J. Beveridge, former Senator from Indiana. Illustrated with many photographs. Octavo. Cloth. Price \$2.00. The Bobbs-Merrill Company, Indianapolis, Ind.

†"LA GUERRE DE 1914." L'action de L'armée Belge pour la defense du Pays et le Respect de sa Neutralite. Rapport du Commandement de L'armée. Paris, 1915. Librairie Chapelot, avec 11 croquis. Price 1 franc.

The mobilization, concentration, plan of defence of the territory, defence of Liege and of Namur, and the operations of the field army in connection with the taking up of a defensive position along the river Gette are described in Chapters I—IV.

Chapter V deals with the operations of the army while falling back upon the second defensive positions along the rivers Rupel and Nethe, with Antwerp as a base; also with the sorties at the time of the battle of the Sambre, during the Anglo-Franco retreat from Mons; and while the battles of the Marne and Aisne were in progress.

The Siege of Antwerp, its capitulation on October the 10th, and the retreat of the army towards the Yser River are discussed in Chapters VI and VII.

The coöperation of the Belgian, English and French forces, and positions along the Yser River, including an account of the battle of the same name are covered in Chapter VIII.

To the military student of the campaign in this sector of the theater of war this publication is of great value, particularly, when the official communiqués that have appeared in the newspapers are too meager to enable any one to arrive at a clear understanding of the movements of the different elements composing the Belgian field army.

The matter is so arranged that the study of the operations is an easy and interesting task.

A. MORENO,

First Lieutenant Twenty-eighth Infantry.

**Impressions
of
Belgium ***

This book, as its title implies, is strictly a "journal of impressions," a diary of the authoress on an expedition into Belgium early in the German occupation, with a party of English men and women who volunteered their services in connection with the Belgian relief work, and who were at times in the theater of operations.

***"A JOURNAL OF IMPRESSIONS IN BELGIUM." By Mary Sinclair. Author of "The Three Sisters," "The Return of the Prodigal," etc. Cloth. Price \$1.50. The Macmillan Company, New York.

With motor ambulances they followed the retreat of the Belgians from Antwerp to Melle, Ghent, Bruges and Ostend, rendering some valuable service in the care of the wounded, both of the Allies and Germans.

The diction is good and the style pleasing. From the title one might expect something of historical or military value which however, is entirely lacking.

**Military
Sketching.***

A new work on Military Sketching and Map Reading is in the field. This one, however, is intended primarily for the instruction of non-commissioned officers and to be used as a text book in the garrison school for this class of enlisted men. It is a book of seventy pages of large size—8 x 10½ inches—illustrated with numerous plates and sketches.

The preface states that the book was written to fulfill the following urgent requirements:

"1. A textbook of Military Sketching and Map Reading within the comprehension of the average non-commissioned officer of the Mobile Land Forces.

"2. A textbook which will relieve organization commanders of devising a new course each year and which will standardize the instruction and furnish a uniform basis for the prescribed tests by battalion commanders and inspectors.

"3. A textbook in which Military Sketching and Map Reading go hand in hand, each being an amplification of the other.

"4. A textbook in lesson form, each lesson being carefully planned as to the amount and proper sequence of its subject matter, and the number of lessons being such that the course may be completed within the time usually available for this subject in the Garrison Course for Non-commissioned officers."

The work has been highly recommended by many of our officers, some of whom are experts in this line.

*"MILITARY SKETCHING AND MAP READING FOR NON-COMMISSIONED OFFICERS." By First Lieutenant Loren C. Grieves, 30th Infantry. Price \$1.25, postpaid. U. S. Infantry Association, Washington, D. C.

**Russian
Army.***

The author of this remarkable book is Major Robert R. McCormick, First Illinois Cavalry, who had exceptional opportunities for observing the inside workings of the Russian Army, during the several months of the great European War. He has certainly made good use of the advantages which fate placed within his reach.

The author left New York in February, 1915, and visited first England and then France. The knowledge which he picked up in these countries gave him a comprehensive view of the general situation and enabled him later to estimate correctly, the special situation as regards the part that Russia was playing and was to continue to play in the gigantic struggle.

Major McCormick's descriptions of his meetings with noted Russians are highly interesting. Pen pictures are drawn of the Czar, the Grand Duke Nicholas Nicholaievitch and General Yanouskevitch, the Chief of Staff of all the armies, which cannot fail to entertain and instruct the military student.

The author gives us many incidents to illustrate the character of the Russian soldier and his officers. For example, he calls attention to the fact that in front of the trenches dummy wire entanglements were often placed. The enemy, advancing to the attack, believed these to be genuine and halted to entrench. The Russians, who have great faith in the bayonet, then charged from the trenches, and the issue was fought out in a hand-to-hand struggle. The fact that the entanglements were dummies, had not only deceived the enemy, but had enabled the Russians to pass through them and deliver the counter-attack at a moment when it was little expected. Other examples are given to show the national characteristics, but there is not space here to repeat them.

The Russian field equipment, including boots and field uniform, are described as very simple and serviceable. The two-wheeled field kitchen or soup-cart is spoken of in the highest terms and the view of our military observers, in the Russo-Japanese War, in this regard, are strongly confirmed.

*"WITH THE RUSSIAN ARMY." Being the Experience of a National Guardsman. By Robert R. McCormick, First Cavalry, Illinois National Guard. Maps, charts and twenty-four full page illustrations. The Macmillan Company, New York. Price \$2.00.

The author also considers the field transportation as peculiarly well adapted to the conditions of campaign in Russia and does not think that automobile trucks would have been a success on the poor roads of Poland and other parts of Western Russia. One of the most interesting things that fell under the observation of Major McCormick were the field bath trains. These follow the soldiers almost to the trenches and enable the rank and file to keep clean. Cholera, typhoid fever and typhus are produced by filth, vermin, and drinking bad water. The Russian soldier drinks tea and patronizes the bath train and is comparatively free from these three diseases.

A forceful comparison is made, in the book, between the preparedness for war of the Russians and the unpreparedness of the English, and the author calls our attention to how similar are conditions, in our own country, to those that existed in Great Britain when the war broke out. He solemnly warns us that, if not rectified, this will lead us to serious if not irreparable disaster. Major McCormick greatly admires the Russian tactics and strategy. The Russian Government did not believe that either the Germans or the Austrians would plunge into the war until they had exhausted diplomacy. Hence the Russian troops were but partly mobilized when war was declared. But the Grand Duke Nicholas was equal to the occasion and had the mobilization take place well back from the frontier so that he would not have to fight until his army was ready.

When he saw the Germans about to seize Paris, he promptly took the offensive and was thus the means of recalling thousands of Teutons to the eastern frontier of Germany. On two other occasions, similar results were obtained to the great benefit of the French and English.

It may be truly said that Russian tactics and strategy dominated the first year of the war. For several months, Russian troops remained on Austrian soil and Germany was twice invaded. With no help from the outside sources Russia fed, clothed, equipped, armed and kept supplied with ammunition, her great armies till May, 1915.

Certainly her rôle, interspersed here and there with frequent offensives, has been a great one.

Because Russia lost the Russo-Japanese War, we are prone to misjudge her, here in America, and to fail to appreciate the wonderful military qualities of her people.

Charles XII, Napoleon, Oyama and von Hindenburg have driven Russian armies from many a battlefield, but history has failed to record a single instance where a Russian Army has been routed. Their training and their religion does not admit of it. They retire when ordered to do so by their generals, but they do not run, and the Teutons have found this out in the present war more than once to their cost. Hats off then to these soldiers, who, individually, may not be the equal in intelligence of the men of some of the other European countries, but who possess soldierly qualities which should win for them the approval of every true military spirit.

And Major McCormick tells us that the Russian officers are noble fellows full of pity and generosity for the unfortunate, and brave in battle against their enemies.

No officer should fail to read "With the Russian Army." The chapter on "Modern Fortifications" is particularly instructive.

The book is well printed on good paper. The maps are poor and have no scale indicated and the spelling of proper names is often incorrect, but, despite these minor defects, the book will prove to an addition to the library of any military student.

N. F. M.

**Balkan
Wars.***

This book, of 150 + vi pages—5x8 inches—is made up of a series of five lectures delivered at the Army Service Schools during the year 1915.

The captions of the several chapters or lectures are as follows: The Causes and Course of the Balkan Wars; The Campaign in Thrace; The Second Balkan War; Notes on the

*"THE BALKAN WARS." By Major Clyde Sinclair Ford, Medical Corps, U. S. A. Press of the Army Service Schools. Price, bound in cloth, 75 cents.

Balkan and Turkish Armies; and Some Sanitary Observations. It has an appendix giving a chronological table of the principal events of these wars, together with a note on the economic effect of their results upon the resources of the Ottoman Empire.

It is illustrated with five small scale maps showing: Southeastern Europe—1912; Adrianople and its Defences; Location of Troops when Armistice was Declared; Location of Troops at Opening of Second War; and Southeastern Europe—1914.

The author does not claim to give a detailed, strategical and tactical account of these wars, but a general idea of the progress of the campaigns, interspersed with notes of interesting incidents connected therewith. The lectures as given were illustrated with numerous lantern slides which it was found impracticable to reproduce, probably on account of the expense involved.

Not the least interesting of the lectures is the first which gives, in a laconic and pleasing style, a short history of the causes leading up to these wars, showing the mixtures of races and religions of these people and the jealousies and hatreds that have existed between them for thousands of years. This information is given in a brief and concise form that would take much reading and laborious research to obtain otherwise and which will be a revelation to the ordinary reader.

The chapter giving the characteristics of the Balkan and Turkish armies will prove of great interest to the military reader.

**The
Horse.***

This book is primarily intended for the use of agricultural students, according to the author. Possibly the latter half will fulfill his intentions but it is doubtful if the first part will impart the proper knowledge to the class of students who only seek an agricultural knowledge of this subject.

The author has selected his material with great success, for the authorities he quotes, and his own personal ideas show good practical horse-sense, an article rare in many of the books brought out these days.

But after reading the first part one is left with a sense of having been hurried through a vast subject so as to leave him somewhat breathless and with a distinctly superficial idea of the matter. In fact, it is more on the order of a quiz book for a veterinary student who wants to freshen his memory for an examination.

However, the arrangement of the first part is admirable, and the selection of the plates and diagrams excellent.

The second part contains much more of the personal note of its author, and consequently imparts much more information to his students than the frigid and mechanical first part.

His explanations of cause and effect are simple and fairly direct but in a few places might be more amplified. For instance in his paragraph on "Work," he says: "Draft horses used for years on the pavement of city streets acquire a predisposition to certain forms of lameness."

In the paragraph on "Condition," the term "pink of condition," is referred to with the explanation that it originated from the fact that the visible mucous membranes of a horse are always of pink color, will not bear criticism. It refers to the pink glow on the skin of a man, not a horse.

The paragraphs on "Treatment and Nursing in Disease," are excellent, especially the few lines on the value of grooming a sick horse, an attention that is very generally neglected.

*"THE HORSE IN HEALTH AND DISEASE." A text book pertaining to Veterinary Science for Agricultural Students. By Frederick B. Hadley, D. V. M., Associate Professor of Veterinary Science in the University of Wisconsin, etc. Illustrated. W. B. Saunders Company, Philadelphia and London. 1915. Price \$1.50 net.

However, a paragraph of directions might have been given as to the doings of it in case of pneumonia in cold weather.

The paragraphs on "General Pathologic Changes," and the following chapter on "Wounds" are clear and comprehensive.

The chapter on "Diseases and their Treatments, etc.," presents just enough information to enable the reader to aid the attendant veterinarian instead of interfering with his patient as is so often done in other books. It is doubtful, however, if the advice to give laudanaum in spasmodic colic is wise. More firmness might have been shown as to the extreme culpability of even attempting to think of curing a case of "glanders" instead of the feeble statement that "Treatment is seldom warranted."

The Index finishes as a most useful and proper ending to a book that can no doubt and will be read by veterinarians as well as laymen with pleasure and profit.

The free use of technical terms which the author in his preface admits having introduced with the rather bald reason that agricultural students and educated farmers are competent to understand them because they understand the English language, is not warranted. A knowledge of Latin and Greek is necessary for most of the technical terms and it is this want of knowledge of these two languages that makes the primary course of instruction at Veterinary Colleges so hard to master.

In these days of education, when knowledge sought for is so materialistic and the humanities are so neglected, so that most colleges are being forced to lower the standard of their entrance and pupils demand a royal road to learning, principally through athletics and mechanical sciences, it is doubtful if the free use of technical words in this work will afford the author the satisfaction he hopes for. However, his intent and his book deserve the success they most decidedly have earned.



EFFICIENCY REPORTS.

It has been recommended by one of our Colonels of Cavalry that Commanding Officers should be required to report, under sub-head "G," page 6, on the annual Efficiency Report, whether or not the officer subscribes for and reads the JOURNAL of the Association of his particular arm. In other words, in case the officer does not so subscribe for and read the JOURNAL of his branch of the service, the answer to the question, under the above sub-head, should be in the negative.

The question to be reported upon by the Commanding Officers, under that sub-head, is as follows:

"Has he availed himself of his opportunities for improvement professionally?" (Opinion.)

This Colonel advances the idea that, if the officer does not have enough esprit or interest in his branch of the service to become a member of the Association of his arm and read its JOURNAL, he has missed some of the opportunities for advancement professionally, and that, therefore, he should be so reported.

While the adoption of some such rule might appear somewhat too stringent, yet it is believed that there is some merit in the suggestion. It is believed that the best officers of our cavalry service are members of the Cavalry Association, and we find that the older and more experienced they become, the more certain it is that they are members of the Cavalry Association.

At any rate there is food for thought in this suggestion.

THE MOUNTED SERVICE SCHOOL.

The annual report of the Commandant of the Mounted Service School is at hand and is one which should engage the attention of those interested in the great work being carried on at Fort Riley.

In addition to giving the usual tabulation as regards the personnel of the school, the classes and their work and its finances, several important matters regarding its location, the curriculum, etc., are considered. Among the more notable points are the following:

"It has been suggested from time to time, in the public press that the best interests of the mounted service might be better subserved by the removal of the Mounted Service School to some eastern locality. The arguments used have in general been the advantage of a milder climate, permitting out door work during a longer winter period; propinquity to the horse markets, horse shows, and horse interests of the East; and better opportunity for those who can benefit the school to become acquainted with its work, its discouragements, and its ambitions.

"Careful consideration of the question during the past year from every view point leads the Commandant to believe that it would be a serious mistake to remove the school from Fort Riley. No military reservation in the country offers such varied and splendid opportunities for military cross country riding; the purchase price of a similar tract of land in the East would be prohibitive; the lease of such a tract would be attended, sooner or later, with complications as to claims for damages, gradual increases in rental, and possible pressure on the Government to acquire tracts at exorbitant prices. The climate of Kansas permits of several months of valuable mid-winter riding hall work, which should be a very necessary part of the regular course of instruction in even a more temperate climate. Experience has shown, too, that attendance upon

horse shows, and the like, is a more valuable function of graduates of the school than of under-graduates, whose experience is limited, and whose steady progress would surely suffer through constant or even occasional interruptions in the pre-arranged curriculum."

"Efforts have been made during the year, by the Commandant and instructors of the school, to impress upon its graduates that the aim of the school is to better enable them to do the work laid down by their regimental and organization commanders, which in turn means better preparation of the mounted arms for the exigences of war.

"Participation in horse shows, the playing of polo, riding to hounds, and the like, are recognized as most valuable aids to advanced equitation, but it has been made clear that these expedients for awakening interest and appealing to the imagination are but means to an end, and should not be carried to such an extent that more serious professional work is lost sight of or neglected."

"During the past year the Commandant has devoted considerable thought to the practicability and advisability of amplifying the course of instruction, in keeping with the plans of the original progenitors of the School of Application for Cavalry and Light Artillery.

"From various sources it has been suggested that tactical instruction in the handling of mounted troops should be imparted, that a course in 'draft and harness' for field artillery officers would be beneficial, and that practical and theoretical instructions in marching troops would add to the value of the course.

"It has even been suggested that the course should, in addition to the present curriculum, follow for cavalry and field artillery officers, the course now pursued at the Army School of the Line—the latter to be converted into a School of Infantry, for infantry officers only.

"Following this line of reasoning, the distinguished graduates of the Infantry School, the Cavalry and Field Artillery School, and the Army Engineer School, would be sent to the Army Staff College.

"It seems quite probable that, should our Army be largely increased, such an expansion of the schools would become necessary and advisable.

"Until such occasion arises however, it would appear undesirable to duplicate at the Mounted Service School, any portion of the curriculum of the Army School of the Line. Instruction in "draft and harness" is likewise given to light artillery officers at the School of Fire, and its introduction at the Mounted Service School would appear redundant and unnecessary at this time.

"The importance of giving young officers expert instructions in marching mounted troops is fully realized; but this is plainly a function of regimental instruction, where troops are easily available.

"In all considerations involving increasing the theoretical or book work at the Mounted Service School, the questions of physical fatigue plays a most important part. Unless the course of equitation were materially curtailed—a matter which seems very undesirable at this stage in its development—the student personnel are as a rule physically unfit for much book study, at the end of a day spent almost entirely in the saddle or shoeing shop. At the same time, it would not be impracticable, should the reorganization of the Mobile Army demand it, to so arrange the curriculum as to make the school a mounted service school in the fullest meaning of the term; balancing the outdoor work in equitation by tactical map problems, war games, and studies involving the handling of mounted troops."

Regarding the above, it might have been added that there is no place in this country where horses can be foraged as cheaply as at Fort Riley. It is certain that there are few places, if any as suitable for a Mounted Service School as is this, to say nothing of the immense amount already invested there in the plant.

The advice to the graduates of the school as to participation in horse shows, etc., is timely and good.

In increasing the activities of this school, should it ever be deemed advisable, great care should be taken not to duplicate the work being carried on at any other service school. Our

officers now have so much to study in these days of rapid progress in the art of war that duplication of instruction should be avoided. In the course of time all of our mounted officers should take the course at Fort Riley and all should also take at least the first year's course at the School of the Line at Fort Leavenworth.

CAVALRY HAS "COME BACK."

FRENCH WON BY USE OF MOUNTED TROOPS IN CHAMPAGNE.

Military Experts had agreed that Horsemen had no Place in Trench Warfare, but Joffre disagreed.

The above startling statement appeared as the head lines in a recent issue of the *Kansas City Times*. This, of course, is a misstatement as the Cavalry has never been away and hence has had no opportunity to "Come Back." Of course, as will be seen from the extracts from this article which follow, the idea intended to be conveyed is that, in the present western theater of operations of the present European War and for the last few months, there has been little or no opportunity for cavalry to operate. Hence, some people—not military experts—had jumped at the conclusion that the cavalry had been relegated to the rear in this and all future wars.

This absurd idea has taken root, more or less, in the minds of some people, due to the fact that, after the backward drive of the German Army from in front of Paris, the contending forces settled down to a protracted term of trench warfare. This has occurred before and will undoubtedly happen again, where the field for cavalry work will be restricted to operations away from the trenches.

Although there are instances of isolated cases where cavalry have charged and carried intrenchments, captured steamboats, etc., no one claims that their proper rôle is that of participating

in the attack or defense of intrenchments. At the same time, they have been so used and are now being so used—dis-mounted, of course,—in the trenches of the Allied Armies in France.

Little or no reliable information has reached us as to what has been done in the line of the tactical handling of troops in the several campaigns of this great war, nor will we know this until after the histories of the war have been written by the General Staff of the several countries engaged in the war, or by the few observers who have been permitted to be present during the operations. Then and then only will we know the service performed by the cavalry of the respective armies.

Then, it is confidently predicted, it will be found that the cavalry will have measured up to the full standard of their proper functions in war and that they have not "Come Back," never having been away.

The following extracts from the above mentioned article are quoted:

"A letter to a Kansas Citian from a friend in Paris several months ago asserted that the French had some two hundred thousand cavalry behind their lines at Arras, purposing to use them in the "grand offensive." At that time, this was considered mere gossip, for military men had agreed that mounted troops had no place in trench warfare. The battle in Champagne has shattered that belief, just as the war has shattered many other military precedents and theories."

"LONDON, Sept. 30.—The cavalry arm of the military service has "come back." Military experts everywhere had declared that mounted troops had no place in trench warfare—that is, everywhere except in France. General Joffre thought differently. He believed there still was use for cavalry in trench warfare, and the grand drive in Champagne owes its success to Joffree's belief.

"A famous French commander, it became known here to-day, participated in the cavalry charge that drove the Germans from their guns.

"German prisoners say that no other action along the Champagne front proved such a surprise to their commanders as the appearance of French cavalry in the thick of the fighting.

"It had been generally believed that cavalry could not be used effectively along the western front and particularly in the hilly country of the Champagne.

"In Paris, however, it was a matter of common knowledge that General Joffre planned to use his cavalry to charge the enemy's guns. For many weeks French cavalry horses had been in training in Southern France for just such an engagement."

"PARIS, Sept. 30.—'It was by no means easy work,' said one of the wounded at the Grand Palais Hospital in describing the battle of Champagne Saturday.

" 'The machine guns which stormed at us—that's why so many of us were hit in the legs—were soon put out of business. Then our cavalry turned up. They had gone so long without a chance to fight on horseback they had were keen to get into it. It was a fine dash, and the Germans bolted on all sides. What they left behind in the way of material, arms, effects and equipment was unimaginable. Their flight turned into a panic when they saw our African contingents after them. The Africans certainly cut them up frightfully with the bayonet.' "

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